S
621.31
N7t
Vol 42+43
DNRC

Board of Natural Resources
Colstrip Hearings

PLEASE RETURN

STATE DOCUMENTS COLLECTION
AUG 1 6 1985
MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59620

Volume 42 & 43

Transcript of Proceedings
for

March 10, 1976
March 16, 1976

Pages 8091-8539

I N D E X

Colstrip 3 & 4 Page

WITNESSES

March 10, 1976, Wednesday 8091

DR. ROBERT R. BELL

Oral Statement 8092

GEORGE ROSSETTER

Oral Statement 8096

ROBERT R. MORSE

Written Direct Statement 8099

URANA CLARKE

Written Direct Statement 8103

Oral Supplement to Written Direct Statement 8104

SHIRLEY J. BERG

Written Direct Statement 8107

PAUL KANE

Oral Statement 8108

WARREN R. McGEE

Oral Statement 8110

RICHARD C. PARKS

Written Direct Statement 8114

Oral Supplement to Written Direct Statement 8117

FRED TERWILLIGER

Written Direct Statement 8118

Oral Supplement to Written Direct Statement 8119

INDEX

Colstrip 3 & 4 Page

WITNESSES

March 16, 1976, Tuesday 8121

WILLIAM M. JOHNSON

Written Direct Statement 8123

Cross, by Applicants 8128

Redirect, by Northern Plains Resource Council ... 8147

Re-cross, by Applicants 8155

DR. ERNST R. HABICHT, JR.

Written Direct Statement 8158

Cross, by Applicants 8176

Redirect, by Environmental Defense Fund, Inc. ... 8215

Re-cross, by Applicants 8225

P. J. GILFEATHER

Written Direct Statement 8229

Cross, by Applicants 8231

Redirect, by Russell Doty 8234

Re-cross, by Applicants 8238

C. DALE VERMILLION, M.D.

Written Direct Statement 8240

Cross, by Applicants 8246

BURTON FARLEY

Written Direct Statement 8250

Cross, by Applicants 8254

MADELINE DANIEL

Oral Statement 8261

Cross, by Applicants 8262

I N D E X

Colstrip 3 & 4 Page

WITNESSES

March 16, 1976, Tuesday, (continuing)

JEAN SPETH
- Oral Statement 8265
- Cross, by Applicants 8265

KAREN BRUNNER
- Oral Statement 8267
- Cross, by Applicants 8268

MARY HEMPELMAN
- Written Direct Statement 8272
- Cross, by Applicants 8274

HARRIET MARBLE
- Written Direct Statement 8278
- Cross, by Applicants 8281

TAG RITTEL
- Written Direct Statement 8287
- Cross, by Applicants 8288

JOHN WOODENLEGS
- Direct, by Northern Cheyenne Tribe, Inc. 8289
- Cross, by Applicants 8298

RUDOLPH KING, SR.
- Direct, by Northern Cheyenne Tribe, Inc. 8301
- Cross, by Applicants 8307
- Redirect, by Northern Cheyenne Tribe, Inc. 8311
- Re-cross, by Applicants 8313
- Re-direct, by Northern Cheyenne Tribe, Inc. 8314

INDEX

Colstrip 3 & 4

WITNESSES Page

March 16, 1976, Tuesday (continuing)

VANCE LITTLEBIRD

Oral Statement 8315

Cross, by Applicants 8318

DICK LAFEVER

Written Direct Statement 8322

Cross, by Applicants 8328

EVERETT KEYES

Supplement to Written Statement 8333

Written Direct Statement 8335

Cross, by Applicants 8339

MARY OLSON

Written Direct Statement 8344

Cross, by Applicants 8345

KAREN A. WAGNER

Written Direct Statement 8349

Cross, by Applicants 8350

JENNIFER GEERING

Written Direct Statement 8353

Cross, by Applicants 8357

PAUL G. PISTORIA

Supplement to Written Statement 8361

Written Direct Statement 8366

Cross, by Department of Natural Resources and Conservation 8373

INDEX

Colstrip 3 & 4 Page

WITNESSES

March 16, 1976, Tuesday, (continuing)

DAVE HILL, JR. (continuing)

Written Direct Statement 8379

Cross, by Applicants 8382

JOHN & GAIL HAVILAND

Written Direct Statement 8392

Cross, by Applicants 8400

LEE A. TORGRIMSON

Written Direct Statement 8406

Cross, by Applicants 8409

LEONARD R. SARGENT

Oral Statement 8413

Cross, by Applicants 8417

Supplement to Oral Statement 8418

Cross, by Applicants (continuing)................ 8420

BILL TOMLINSON

Written Direct Statement 8422

Cross, by Applicants 8429

JOHN BAILEY

Oral Statement 8434

Cross, by Applicants 8435

RALPH REINER

Oral Statement 8436

Cross, by Applicants 8442

INDEX

Colstrip 3 & 4

WITNESSES Page

March 16, 1976, Tuesday (continuing)

TOM DAILEY
  Written Direct Statement 8446
  Cross, by Applicants 8454
LAURAN EMERSON
  Written Direct Statement 8457
  Cross, by Applicants 8459
JAY CORNISH
  Written Direct Statement 8461
SAM H. SPERRY
  Written Direct Statement 8477
  Cross, by Applicants 8480
ROBERT McKELVEY
  Written Direct Statement 8482
  Cross, by Applicants 8486
STEVE GOLDSTEIN
  Written Direct Statement 8490
  Cross, by Applicants 8507
ROBERT F. ADAMS, JR.
  Written Direct Statement 8510
  Cross, by Applicants 8515
PAUL T. RICHARDS
  Written Direct Statement 8524
  Cross, by Applicants 8534

WEDNESDAY, MARCH 10, 1976

The hearing reconvened at 10:10 A.M. on Wednesday, March 10, 1976, in the Chambers of the Montana House of Representatives, State Capitol, Helena, Montana.

The Honorable Carl M. Davis, Hearings Examiner, presided over the proceedings.

APPEARANCES:

Department of Natural Resources and Conservation:

Donald MacIntyre, Esq.

The following proceedings were had:

HEARINGS EXAMINER: Let the record show that Mr. Don MacIntyre is present as counsel for the Department of Natural Resources. I have been advised that you are also going to appear as counsel for the Northern Plains in view of Mr. Graybill's absence today, if any necessity arrives therefor. I think the record should show I've been advised by the Applicants that they have consented to us proceeding without any of their counsel being present today and have waived any right of cross-examination. So we will therefore proceed. We have a public witness, Dr. Robert R. Bell, from Sidney, Montana.

DR. ROBERT R. BELL, appearing as a public witness, having been first duly sworn upon his oath, testified as follows:

HEARINGS EXAMINER: If you talk about four inches into the system and go right ahead with your statement.

STATEMENT OF DR. ROBERT R. BELL

I would like to present today a position statement on coal development in Eastern Montana. It was prepared during 1973 and '74 by a coal committee of the Economic Development Association of Eastern Montana. It was approved in the summer of 1974 by the delegates at the quarterly meeting. It is read with the approval of the board of directors who were contacted the 19th of February, 1976. The board of directors were individually called, each gave his full approval of this statement to become a part of the hearing.

"The Economic Development Association of Eastern Montana is a voluntary non-profit corporation composed of three delegates from each of the eighteen eastern Montana counties. EDAEM's objective is Area Development. It's purpose is to provide leadership required for the development, improvement, conservation and efficient use of all available resources and to promote mutual cooperation between local, State, federal, and private agencies and individuals.

"The Economic Development Association of Eastern Montana is not opposed to the development of coal in eastern Montana, provided that our present economy is not sacrificed for the sake of the development. Our Association defines development as a condition where people are better off. It means a higher real per capita income. Real income is more than just wages from work. It also includes the enjoyment of the environment, neighbors and how effectively and cheaply public services are provided. We feel that real income can be increased without a change in wages if the environment is getting better and if desired public services are being more efficiently and cheaply provided.

"The Association also feels that development implies something about income distribution. For if only a few people benefit while others do not, then development hasn't come about. For instance, if tourism expands and contributes to a greater retail business in the State, while Montanans are called upon to pay for the necessary highways, parks, and public facilities, then only a few benefit at the expense of many. Or, if land developers leave local citizens the tax burden of providing services associated with development, the income may have been poorly distributed from the subdivision profits, and if so development has not been achieved.

"Very often industrial growth is desired for the benefit of only a few. In that case it cannot be called development. Frequently, growth of population requires additional schools, streets, public services which cost the population at large. This is the case when labor must be imported to develop a resource. Eastern Montanans today are becoming more aware of the various trade-offs which must be made in order to attain added industrial growth.

STATEMENT OF POSITION

"1. Prior to the construction of additional mine mouth conversion plants, the people of eastern Montana should have the opportunity to observe and evaluate the environmental effects and their impact on the existing social, economic, and natural resources. During this period coal should be converted near the areas where it will be used.

"2. All new federal coal leases should comply with the Montana Strip Mine Siting Act, Strip Mining and Reclamation Act, Utility Siting Act, Coal Conservation Act, and Water Use Act.

"3. If strip mining is to be increased it should be done only in those areas where all resource values and land uses have been thoroughly inventoried.

"4. Because of the value of water in eastern Montana, the use of this resource for domestic, municipal, agricultural, and stream fisheries should not be sacrificed for large scale industrial development.

"5. If western coal is to play an important part in the nation's Project Independence, it is our position that Federal Impact funds be made available to help alleviate the burden on local taxpayers.

"6. Local units of government in the development area should receive their fair monetary share of revenue generated by the mining and development of the coal resources.

"7. During the period in which the nation moves to evaluate its energy alternatives, energy conservation must become a way of life for everyone.

"8. The Association favors the concept of prepayment of taxes by industry to ease the tax burden on units of local government.

"9. The reclamation of mined lands must be based on effective pre-planning, sound ecological principles as well as the use of proven revegetation practices. It is also our position that all mine land reclamation be carried out under the intent of The Montana Strip Mining and Reclamation Act of 1973 and must apply to all lands in the State.

"We concur with the views expressed by our Governor, the Honorable Thomas L. Judge on April 24, 1973. He said:

> 'Our State, from all indications, is on the threshold of massive energy development to ease the much publicized and controversial 'energy crisis' but inherent in a simplistic solution to one crisis are seeds for another; that of the degradation and destruction of human and natural environmental values and the massive consumption and depletion of local resources. I believe it unreasonable, inequitable, and contrary to national policy and interest, to temporarily feed a nationwide energy appetite by creating social, environmental, and natural resource problems in one region.'

"In summary we would like eastern Montana to help meet the energy needs of our nation. However, we believe a careful distinction must be drawn between energy needs and energy demands, and we do not believe that one region should be asked to bear a disporportionate share of the social and environmental costs of meeting nationwide needs." Thank you.

HEARINGS EXAMINER: Thank you, Doctor Bell, and your testimony statement will be made a part of the permanent record and go to the Board, just like the testimony of every other witness in this hearing. So thank you, sir, and we will recess until we get something else to do.

(WITNESS EXCUSED.)

RECESS: 10:20 P.M.

Following a brief recess, the hearing reconvened at 10:40 A.M. on Wednesday, March 10, 1976.

GEORGE ROSSETTER, appearing as a public witness, having been first duly sworn upon his oath, testified as follows:

HEARINGS EXAMINER: Mr. Ressetter, will you sit in that chair and speak into that mike, about four inches from it. And if you'd state your name and what you do and then go ahead with your statement.

STATEMENT OF GEORGE ROSSETTER

My name is George Rossetter from Fishtail, Montana, and I'm a rancher and farmer. Should I continue?

HEARINGS EXAMINER: Would you identify exactly where Fishtail is for the Board members, in case some of them are not acquainted with it.

WITNESS: Fishtail, Montana is near -- oh, about 80 miles south and west of Billings.

HEARINGS EXAMINER: Go right ahead, sir.

I am a stockholder of the Commonwealth Edison Company, which serves eight million people in northern Illinois with electricity. This company is purchasing coal here in the west and shipping it by railroad to Illinois, where it is utilized.

Commonwealth Edison has just put into production a second coal-fired generating plant, although its main thrust is in the field of nuclear power. The location of these coal-fired plants is in a river valley which has been used for many years for power plant facilities. The area is industrial in nature and surrounded by hills and some distance from agricultural land. Thus, the emissions have a less disturbing affect than they might have elsewhere.

The contrast between this and the situation in Montana is apparent. I do not understand why Montana Power and its sister utilities insist upon the construction of Colstrip plants 3 and 4 in the face of great opposition by citizens of the state. Surely there are locations in Washington and the Northwest where the generators can be built close to the populace and industry that will use the power, as in Illinois. If Commonwealth Edison can build plants and import coal, why cannot these utilities in the Northwest do the same? Why cause further discomfort and damage to Montana agriculture by the construction of unsightly transmission lines when the railroads are already in place and eager to transport the coal? Thank you.

HEARINGS EXAMINER: Yes, sir; and thank you for your appearance. We will be in recess.

(WITNESS EXCUSED.)

RECESS: 10:44 A.M.

Following a brief recess, the hearing reconvened at 11:30 A.M. on Wednesday, March 10, 1976.

ROBERT R. MORSE, called as a witness by the Northern Plains Resource Council, having been first duly sworn upon his oath, both as to his written and oral testimony, testified as follows:

HEARINGS EXAMINER: Mr. Morse, I understand that you have a written statement, and you advised me that you have nothing further to add to it. It has to be sworn to under our rules, and now that it is, it will be filed. And I would like the record to show that counsel for the applicants have advised me that they waive any cross-examination on your testimony. Therefore, unless you have something to add to it, it will go to the Board, together will all the other evidence in this hearing, and be made part of the permanent transcript of the hearing. So that's all there really is to do if you don't have anything further to add.

MR. MORSE: I have nothing to add.

HEARINGS EXAMINER: Very well. Thank you very much for coming, sir.

(WITNESS EXCUSED.)

(THE WRITTEN DIRECT STATEMENT OF ROBERT R. MORSE WAS DIRECTED TO BE INSERTED AT THIS POINT.)

STATE OF MONTANA

BEFORE THE BOARD OF

NATURAL RESOURCES AND CONSERVATION

STATEMENT OF

ROBERT R. MORSE

My name is Robert R. Morse. I am President of Hall and Hall, Incorporated, P. O. Box 1924, Billings, Montana. I have been involved with farm and ranch financing in Montana, Wyoming and Colorado for the past twenty-three years. I am an accredited member of the American Society of Farm Managers and Rural Appraisers. At the present time, I devote full time to appraising farms and ranches in Montana and Northern Wyoming.

It has been my experience that power transmission lines through a farm or ranch pose a potential limitation to the full capabilities of that property. I feel that the highest and best use of a given property can change with the times. The fewer restrictions, easements, or entanglements the land has, the greater the capabilities of the property. This is especially evident as rangeland is broken from sod and put into more intensive cultivation. Power transmission lines inhibit the most efficient use of large machinery. The transmission lines become a special consideration if land is to be developed for sprinkler irrigation.

In appraising farm and ranch properties, I must, and do, consider the impact of power transmission lines.

HEARINGS EXAMINER: We will recess until 1:30.

RECESS: 11:30 A.M.

Following the luncheon recess, the hearing reconvened at 1:50 P.M. on Wednesday, March 10, 1976.

HEARINGS EXAMINERS: We have some public witnesses who wish to appear, and under the Administrative Procedure Act, the Utility Siting Act we're proceeding under requires all testimony to be sworn; and so if you have a written statement, after you're sworn, you can submit it. Generally you're subject to cross-examination, but today the applicants have the right to cross-examine the opponents; and, of course, the other side cross-examines the proponents. As I understand, everyone here today would be opponents. Therefore, the applicants would normally have the right to cross-examine you on your testimony or your statement; but they have waived any cross-examination today, so you can merely make your statement. If you have a written statement, you can read it into the record or you can simply file it, because it will be transcribed and go to the Board members in written form and become part of the evidence in this hearing. So if you have any questions, don't hesitate to ask; and I guess we'll start with you, since you're in the front row, Mrs. Clarke, if you'd like to come forward and raise your right hand and be sworn?

URANA CLARKE, appearing as a public witness, having been first duly sworn upon her oath, both as to her written and oral testimony, testified as follows:

(THE WRITTEN DIRECT STATEMENT OF MRS. URANA CLARKE WAS DIRECTED TO BE INSERTED AT THIS POINT.)

URANA CLARKE, LOG-A-RHYTHM, NINTH STREET ISLAND,
LIVINGSTON, MONTANA 59047, TELEPHONE 406-222-0383

3-10-76

March 9, 1967

Board of Natural Resources
Helena, Montana

Dear Sirs:

This letter is to express my opposition to the construction of Coalstrip 3 and 4.

I am a Montana Immigrant, from New England, happy to find a life where beauty and healthy living have not yet been destroyed. The construction of the proposed factories endangers such a life for all of us. Regardless of what is said during the planning stages, such structures divert great quantities of water from the normal pursuits of the residents of such areas. There is not enough water in Montana to supply the ranches, the homes, and the present places of business such diversion occurs.

One of the plans for providing the water involves a dam upstream from me and from the city of Livingston. Dams destrpy thousands of acres of fine, productive property and the homes of those who have used the land. Dams endabger all who are downstream from them. In our case the dam is proposed on a fault. Even if earthquakes do not occur the water table for all who survive the property taking is sure to be changed.

Employment is given as a reason for needing the factories. The construction involves temporary employees who may stay on to be a burden to the residents. The disruption of school systems and other facts of local life has been discussed many times. If we ship out the coal in unit trains we give steady employment to many and do hot pollute the air of our state. There can be plenty of work provided, protecting our water sheds, improving local sewage systems and in general making the State safe for our two major sources of income, ranching and tourism. The factories can only harm them.

It is difficult to believe that Montanans need the extra power that will be generated if Coalstrip 3 and 4 are built. Education can cut its consumption if we use it for that purpose. Before the present cfisis struck, Montana Power spent great sums of money frightening people into installing what they called "Security Lights", hideous mercury-vapor lamps that ruin our beautiful night skies with their persistent greenish glow. They even come on in the daytime when there are clouds, wasting vast amounts of power. Such ugliness should be banned. It has never been proved that their rays are not among the many man-caused reasons for the increase in cancer. Chemicals are known as a cause, at least some are, but these powerful sources of radiation have never been tested.

I repeat, destruction of beauty, pollution of the air, misuse of water, and no proof of need of the power in Montana, make the construction of the plants wrong for Montanans.

Very truly yours,
Urana Clarke
(Miss) Urana Clarke

HEARINGS EXAMINER: If you would state your name and your address and then go right ahead and make whatever statements you'd like to make.

Oral Supplement to Written Statement,
By Urana Clarke:

My name is Urana Clarke. I am a musician, writer, amateur astronomer; and I moved here from New England, and that is a part of my reason for being here to oppose Colstrip 3 and 4. Where I have lived so much of my life, sorely but surely, men have ruined things. So far we haven't had a chance to do that to Montana, not completely; and I feel that anything in the nature of these factories would certainly endanger the beauty of the country, the clear and wonderful air. And from my point of view as an amateur astronomer, I have loved looking out at our comet in the last week and at all the stars and the things that we have.

There are many people say things about the value of this new structure if it is given permission to be put in. They say that it will give employment. Well, we've had other bitter experiences with that and employment is needed for a short time and then it isn't needed; and something goes up we are not sure of whether or not it could possibly meet the kind of environmental conditions that we should have and should maintain in Montana, because this is where we have it. So far men have not destroyed it; and I feel that we ought not to encourage it.

As I've lived here the 12 years I've been in Montana, I've listened to the commercials from Montana Power and it is always been to try to persuade people to use power. Among them, before the crisis came in, was the effort on their part to sell great numbers of what they called "security lights." I'm sure you've seen them; they're all over Montana, and I've been in many places and I've never seen so many. They are a horrible green; they come on when it gets even just slightly dark. And to someone who loves the sky, it's a dreadful thing to see these things. They get in your way.

Also there has been a great deal written on whether or not they are safe, physically, for people; and are they one of the many causes that man have created increasing the amount of cancer that we have. I think we can educate people not to be afraid; we can educate them to take care of things. If we try and for this reason there is so little need, as I see it, as a musician and so on, for all this extra power. We have a place to have hydroelectric power; we have still space for facilities of that.

One other very important thing to me is the use of water, which would be required in this case. I built my home on an island in the Yellowstone River, and I love my home, and I have a clear view of everything from it. And yet, again and again pops up the story that there will be a dam, quite well known now, Allenspur Dam, built upstream from me, and then I'm on the edge of Livingston, so the City of Livingston would be below it. The plans for this dam, for some strange reason, are to place it on an earthquake fault. Now, even without earthquakes, dams give way, And that does all sorts of things to the people below it. It simply wipes them out.

Also, anything of this sort affects the water table, and those of us who've put down wells expecting to loaf for the rest of our lives wherever we are, cannot have the water table destroyed. I feel that anything in Montana that takes more water will take it away from our ranchers, which are our principle source of income; from the streams, which bring tourists here, and that's our second highest source of income; and from us, the people who really love to live here.

And I am against it as you must realize. Thank you so much.

(WITNESS EXCUSED.)

HEARINGS EXAMINER: That you very much. Shirley Berg?

SHIRLEY J. BERG, appearing as a public witness, having been first duly sworn upon her oath, both as to her written and oral testimony, testified as follows:

HEARINGS EXAMINER: And your name is Shirley Berg, you're from Helena, Montana?

WITNESS: Yes.

HEARINGS EXAMINER: And you've filed a written statement that will go to the Board as part of the evidence in this case; and you may add anything to it at this time, if you wish, or it can go just the way it is.

WITNESS: I will leave it the way it is.

HEARINGS EXAMINER: Thank you, and it will go to the Board.

(THE WRITTEN DIRECT STATEMENT OF SHIRLEY J. BERG WAS DIRECTED TO BE INSERTED AT THIS POINT.)

(WITNESS EXCUSED.)

March 10, 1976

Opposed to Coal strip 3 & 4

I am Shirley A. Berg. R.N. - Radiation nurse practitioner, also I have worked in a Tree and shrub nursery for 4 1/2 years in Helena. Many of the native plants were used in the Nursery. I also have always been interested and active with the environment.

I am opposed to Coal strip 3 & 4 for many reasons, will only mention a few.

The air pollutants will not only have possible but a strong probable, detrimental effects on the Trees, shrubs and grasses, There are many such places in Montana now - that we are talking about, but very evident the plants are dying due to air pollution. If these pollutants kill plants what are the long term effects on people - There are many signs they are not being discussed.

Along with the effects of Coal strip 3 & 4 Comes the Transmission lines with their land and esthetic damage. We don't need any of these damage done - give the business to the railroads and ship the coal to where it is to be used. Thank you for this opportunity to speak up.

Shirley A. Berg R.N.
[illegible] Helena

-8107-

PAUL KANE, appearing as a public witness, having been first duly sworn upon his oath, testified as follows:

HEARINGS EXAMINER: Mr. Kane, do you want to read your statement into the record, do you want to add anything to it, or do you want it to just go to the Board in the written form it is, sir?

WITNESS: I will read it into the record.

HEARINGS EXAMINER: Alright, sit down, and if you'll tell your name and what you do. Have you got a copy of it there? Okay, sir.

STATEMENT OF PAUL KANE

My name is Paul Kane. I live in Somers, Montana and I'm representing Flathead Tomorrow, a group of citizens concerned about the future of the Flathead River drainage.

We have not been directly affected by the proposal for units 3 and 4 at Colstrip except individually as residents of Montana; but we have followed this controversy with great interest, because the issue to be settled at Colstrip will set a precedent for many decisions facing us in the Flathead and throughout Montana.

If you, the Board of Natural Resources, decide to allow the proposed generating plants and transmission lines to be constructed, you are legally and morally permitted to take this action only if several conditions have clearly been met:

1) That most Montanans favor their construction;

2) That a need for their construction exists;

3) That the environmental, social and economic impacts and

trade-offs involved in the proposal have been identified and evaluated; not just in your Department's energy planning division or in Montana Power Company's R & D Department, but publicly, as we are doing here this afternoon; and

4) That this evaluation favors their construction.

We are not convinced that any of these conditions have been satisfied. In fact, it appears that some of them cannot be.

We will most emphatically add our voice to the majority of Montanans who have already spoken out against the construction of Colstrip units 3 & 4 and their accessory transmission facilities; and even more basically to the majority of Montanans who oppose the strip-mining of our coal to fuel such a plant.

We challenge the philosophy that the mere existence of a market or a demand for electrical energy sufficiently demonstrates that a real need exists for its generation and use. We concur with Gary Wicks in his challenge of the underlying philosophy and practicality of the proposed national policy reflected by Project Independence. If there is any real need in energy today, it must surely be to reduce our energy consumption and to develop alternative, renewable and nonpolluting sources; not to trade the Montana we know now for an industrial wasteland for the short-term maintenance of a status quo of questionable value.

And finally, in this controversy, as in virtually all important economic and environmental decisions facing us in Montana and nationally, we laymen find ourselves at the mercy of and bewildered by the conflicting opinions of experts in the field. Montana Power Company claims we need the power for a growing Montana; the Department's EIS clearly indicates we don't. Montana

Power says air pollution standards will be met; the Department says they won't and further, that the standards aren't high enough anyway; and on and on. Surely such basic conflicts must be resolved before the impact of this proposal can be adequately evaluated.

In closing, we would urge you to consider the most valuable resource at stake here -- the advantages of environmental quality and a healthful way of life uniquely offered by the Montana we now enjoy and love. Let us not squander this legacy in the name of short-term financial gains or the attainment of an unrealistically proposed national priority. Thank you.

HEARINGS EXAMINER: Thank you very much, sir. Your testimony will be made a part of the permanent record in these proceedings.

(WITNESS EXCUSED.)

WARREN R. McGEE, appearing as a public witness, having been first duly sworn upon his oath, testified as follows:

HEARINGS EXAMINER: If you wish to read it into the record, or we can file it in the record, or you can add anything to it you wish, whatever is your preference.

WITNESS: I'll read it into the record.

STATEMENT OF WARREN R. McGEE

I am Warren McGee; I am a retired railroad conductor in Livingston, after 40 year's service on the old Northern Pacific and now Burlington Northern Railroad.

The reasons I see no real need for making Montana a garbage dump for west coast electrical power needs at this time are: Montana does not need the power Colstrip 3 & 4 will produce in the near future. Montana Power was not able to foresee a need for natural gas supplies originating in Montana just a few years ago, for they let other states capture them. How come they feel energy needs are so critical today? Is it a real problem or money talking?

Most of Libby Dam's electrical production is promised to Montana, so said Senators Mansfield and Metcalf in 1967. Libby Dam has not reached one-half it's maximum as yet. Montana Power has encouraged the waste of electrical and natural gas supplies with yard lights burning continuously. Are they sincere?

Montana Power will undoubtedly object to serving customers with standby power, if one would attempt to supply their own power needs with solar or wind-generated energy. Montana will look like a porcupine with tall poles carrying high tension power lines to the west coast.

California will not tolerate air pollution in their state caused by plants such as Colstrip 3 and 4. Why should we? Eighty-eight hundred pounds of particulate per day is excessive to anyone living downwind. When the MHD process is perfected, it will be more appropriate to consider plants such as 3 and 4, for this process hopes to save and conserve natural resources for tomorrow's society, and that is the name of the game as I see it.

Scientists now predict atomic power plants are the only long-range answer to tomorrow's energy needs. The American public is being encouraged to have smaller families, and today it is only beginning to develop alternate energy sources for their homes; and the power needs from plants such as Colstrip 3 and 4 should decrease in the future.

I plan on heating and lighting my home in Livingston with wind power and you all know Livingston could easily light up much of Montana with its wind power. We are awaiting someone such as Montana Power to tell us how to build and install the necessary controls that windmill electrical plants will require. Many areas of Montana have reliable wind power sources.

To conserve the energy resources of this nation should be our common objective, for our way of life is in serious jeopardy. Would this nation be able to sail its ships or fly its planes and move its armies if it were faced with the same situation it faced in World War II? I really believe we have an energy crisis. Do you? Will our children and their children have the same opportunities our forefathers endowed us with? I think not, unless we put the dollar in second place now. Thank you.

HEARINGS EXAMINER: Yes, sir.

WITNESS: I probably could add a little bit. As a railroad man I am aware of the employment possibilities hauling the coal would provide to cities such as Livingston; and these type of employment opportunities would be far greater benefit to Montana's economy than the temporary employment possibilities of building Colstrip 3 and 4. Thank you.

HEARINGS EXAMINER: Yes, sir. Your testimony will go to the Board. Next gentleman?

WITNESS EXCUSED.

RICHARD PARKS, appearing as a public witness, having been first duly sworn upon his oath, both as to his written testimony and the oral testimony to follow, testified as follows:

HEARINGS EXAMINER: Please be seated, sir, and state your address and proceed with your statement.

(THE WRITTEN DIRECT TESTIMONY OF RICHARD PARKS WAS DIRECTED TO BE INSERTED AT THIS POINT.)

To: BOARD OF NATURAL RESOURCES

From: Richard C. Parks Box 196 Gardiner, Mt. 59030

Subject: Colstrip 3 and 4

The Colstrip project is a poorly planned one having unknown affects on the wrong location in order to achieve a result of dubious value. I will briefly give my rational for each of these points. It is clear that each has been covered in some detail by expert witnesses. It is my desire to make one other point. We have heard over and over how important Colstrip is to the business future of this state. I am a retail merchant from Gardiner, Montana. I say that this business is bad business. I live in a town that is annually cycled through a boom and bust sequence. Take my word for it - no one makes any money off of a situation like that.

I contend that the Colstrip proposal is poorly planned for two basic reasons. First it is very alarming to me that the proposal only provides for about 17 days water supply on the site. This should bother MPC and its partners as well. Any major failure in the water delivery system would shut down the plant. My chief concern is that it allows for no flexability in water use. The plant must continue to draw water even during the spring and late summer periods of low flow. It is this kind of piecemeal approach to the scarce water resource that will foreclose eastern Montana's agricultural future and bury my end of the basin under unnecessary reservoirs.

Secondly it is poorly designed in terms of energy conservation. The national administration has declared that we are to have energy self-sufficiency within ten years. Project Independence shares with this project one basic fallacy. This false assumption is that we can continue to double our electrical consumption every decade with only a little new technology. This plant will waste about two-thirds of the energy it produces by dumping it into the atmosphere through cooling units. No new construction of thermal power plants should be allowed that does not make use of this waste heat for space heating and other compatible energy needs.

The Board of Health's hearings and their decision on this project document the assertion that no one is sure of what this plant means in terms of pollution. If the board was serious in its "conditional" approval and really means to shut the plant down when it turns out to be an excessive polluter then I submit that this board should save MPC and company a lot of money by simply denying the request.

It is admittedly an open question as to whether it is more or less expensive, in terms of energy, to ship coal to load centers or to use mine-mouth generation. There is no question that to use the latter technique means that there can be little achieved in the way of plant efficiency as discussed before. It also means that whatever adverse impacts may be present will be charged to Montanans while the benifits are exported.

It seems to me clear that whatever one says about the need for this project it boils down to an argument over the assumptions that will be used in the equation. I don't think it is wise to accept as a basis for the calculation the projected demands of the power companies. These represent their wishes for future business - not an objective estimate of real needs.

In summary then I can say that ask you to deny this application. It is based on an estimate of needs which prudence should indicate is unrealistic. It embodies obsolete technology which will prove countraproductive to real progress in meeting our future energy needs. It is the wrong project in the wrong place and will only serve to achieve an undesirable objective.

Supplement to Written Statement,
by Richard C. Parks:

My name is Richard Parks. I'm from Gardiner, Montana. I'm a retail merchant; and one of the things I'd like to state right off the top is that we've heard over and over again how important this Colstrip development is to be to the business of Montana. Well, I'm a businessman, and I say this business is bad business. I live in a town that is affected annually by a boom and bust cycle; and I'll tell you something about boom and bust. We live in Gardiner because we like the place, not because we're getting rich off of it. It's just imagination if anybody thinks that it's good business to get trapped into that kind of cycle.

What I want to say about this plant, I'd really like to summarize it very briefly, and let the written statement stand for the rest of it. I just see the Colstrip plant as being a poorly planned one from an engineering point of view; it's got unknown affects on the wrong place to achieve a result of somewhat dubious value. I'll let it go at that. Thank you.

HEARINGS EXAMINER: Thank you.

WITNESS EXCUSED.

FRED TERWILLIGER, appearing as a public witness, having been first duly sworn upon his oath, both as to his written testimony and the oral testimony to follow, testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF FRED TERWILLIGER WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 10, 1976

Board of Natural Resources
Helena, Montana

I was born in Livingston, attended school there, and graduated from Montana State University in Bozeman. After college, I worked for a time in Livingston and Billings, spent four years in the U.S. Air Force and then worked as a physicist for the University of California at Berkeley.

In 1968, I moved back to Montana. I have worked as a salesman, as a ranch hand, as a fishing guide, and I have taught school. I moved back to Montana because Montana is a better place to live than any of the places I lived or visited outside the state.

I oppose Colstrip units 3 and 4 at this time because I want Montana to remain a good place to live. I believe that the full impact of generating facilities on agriculture, through such things as sulphur dioxide discharges and ozone release from transmission lines, cannot yet be evaluated. I further believe that the request to build the third and fourth units should be denied until that impact from the first two Colstrip units can be evaluated.

Furthermore, I believe that the economy of the state of Montana would benefit more in the longrun by hauling the coal out of the state, to the areas where the energy is needed--the industrial centers where the energy shortage is becoming critical. The three hundred-some jobs which would be created for the Burlington Northern Railway for hauling the coal far outnumber the temporary construction jobs which would be created by the building of the units, over a long period. Additionally, possibly disastrous social and economic impacts which could result from the temporary needs for schools, housing, taxes, etc., would be avoided.

In the face of growing environmental degradation throughout the world, I cannot help but think that Montana's clean air, clean water, and clean environment will itself become a more and more valuable commodity if we are able to save it. Even if pollution were minimized, there can be no doubt that the plants would pollute the air more than if they were not built.

The transmission lines which would be necessary to transfer the electrical energy to the industrial centers, besides being [illegible] less efficient than hauling coal to these centers, would remove some agricultural land from production. In the face of a growing world-wide food shortage, agricultural land, too, is becoming more and more valuable, not only monetarily, but even more so in terms of the needs of the people.

Thank you for the opportunity to present my views.

[illegible]

[illegible], Montana

Oral Supplement to Written Statement

By Fred Terwilliger:

My name is Fred Terwilliger; I'm from Livingston, Montana. I'm a salesman. I don't really have a whole lot to contribute more than my written statement, what's already been said. I agree with what has been said here. I think that economically for the state it makes more sense to haul the coal out of the state, according to the draft Environmental Impact Statement and advertising statement by Montana Power about a year ago. There would be a net increase of 240 some permanent jobs by hauling the coal from the state rather than constructing the two additional plants at Colstrip.

Additionally, something like 30 percent more energy would be saved by transporting the coal, due to the transmission line loss. The transmission lines themselves would remove agricultural land from production and I think this and the additional ozone released into the atmosphere could be detrimental to agriculture -- point out that further need, you know -- I think with the world food shortage, and so forth, I think that agricultural land for agriculture is going to be more and more in demand and consequently of more value economically to the state.

And I think at this point we don't know enough about the impact of sulfur dioxide that would be emitted on agricultural land around the Colstrip area, which would also have an effect on the economy of the state and prove to be detrimental. And I think that with the ecological degradation throughout the world, that clean air, clean water and a clean environment are going to be more and more valuable economically to the state. Thank you.

HEARINGS EXAMINER: Thank you and your written statement and your oral statement will go to the Board.

(WITNESS EXCUSED.)

HEARINGS EXAMINER: Is there anyone else? Alright, we'll stand in recess until 2:30; and if we don't have any more witnesses by then, we'll adjourn for the day. Thank you folks.

RECESS: 2:10 P.M.

TUESDAY, MARCH 16, 1976

The hearing reconvened at 9:03 A.M. on Tuesday, March 16, 1976, in the Chambers of the Montana House of Representatives, State Capitol, Helena, Montana.

The Honorable Carl M. Davis, Hearings Examiner, presided over the proceedings.

APPEARANCES:

Applicants:

William M. Bellingham, Esq.
John L. Peterson, Esq.
John Ross, Esq.

Northern Plains Resource Council:

Leo Graybill, Jr., Esq.

Environmental Defense Fund, Inc.:

Hal Haddon, Esq.

Department of Natural Resources and Conservation:

Donald MacIntyre, Esq.

Counsel for Public Witness, P. J. Gilfeather:

Russell Doty, Esq.

The following proceedings were had:

HEARINGS EXAMINER: Are the parties ready to proceed?

MR. BELLINGHAM: Applicants are ready, sir.

HEARINGS EXAMINER: Very well. The Northern Plains Resource Council -- I think Mr. Graybill has a witness.

MR. GRAYBILL: I will call Mr. William Johnson.

WILLIAM M. JOHNSON, called as a witness by the Northern Plains Resource Council, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF MR. WILLIAM M. JOHNSON WAS DIRECTED TO BE INSERTED AT THIS POINT.)

STATE OF MONTNAA

BEFORE THE BOARD OF

NATURAL RESOURCES AND CONSERVATION

TESTIMONY OF

WILLIAM M. JOHNSON

Q. State your name and occupation.

A. William M. Johnson, 1311 Shirley Road, Helena, Montana. I am a public utility consultant specializing in the various facets of rate case proceedings.

Q. Will you state your experience in this field?

A. I was Auditor and then Director of the Public Utilities Division of the Montana Public Service Commission for fifteen years, and have been engaged in the consulting field for two years. I have previously testified before various State regulatory commissions, the FCC, FPC, ICC, and other governmental agencies. I have been a Hearing Examiner for the Montana Commission on Rate Proceedings, and have acted as a joint board member in ICC rate proceedings. I have also testified in Montana District Courts. I have attended various utility regulatory schools and seminars. I have also worked closely with other consultants, such as George Hess of Minneapolis and Dr. Lionel Thatcher of the University of Wisconsin and the Wharton School of Finance.

Q. I have asked you to prepare an exhibit setting forth the impact of the addition of Colstrip Plants 1, 2, 3 and 4 upon the existing revenue requirements of The Montana Power Company. Have you done so?

A. Yes.

Q. Please describe it for us.

A. I have prepared an Exhibit marked Exhibit ______. All results have been developed from numbers and information furnished by The Montana Power Company or taken from official reports by them or reports made for them. The $1,000,000 wheeling credit for Units 1 and 2, on line 8, was arrived at by doubling the wheeling credit estimated for Unit 1 by The Montana Power Company. This Exhibit does not attempt to preclude additional revenue requirements in the period 1974 to 1981, arising from existing plant. However, as they are not known, it is impossible to assess the extent of the additional revenue requirements, if any.

I have taken investment figures furnished by the Company and applied carrying charges furnished and developed by The Montana Power Company and Westinghouse to arrive at additional revenue requirements resulting from the addition of The Montana Power Company's share of Colstrip Units 1, 2, 3 and 4, to the plant in service of The Montana Power Company. These are shown on Exhibit _____, Lines 3, 9, 15 and 21.

I have used the 1974 revenue requirements results, as the 1974 results were the only full-year results available under the existing rate schedules.

Therefore, to satisfy the request to assess the impact of Units 1, 2, 3 and 4 on existing rate schedules, it was necessary to use existing rate schedules and apply them to The Montana Power Company sales projections for 1981. This was done by using the average revenue per KWH sold on a class-of-service basis, as reported by The Montana Power Company to the FPC in 1974, and is shown on Line 30.

Naturally, if rate increases are granted between now and 1981 to satisfy revenue requirements generated from existing plant, the impact from the addition of Units 1,2,3 and 4 to those 1981 rate schedules would be somewhat less. However, it would not change the total additional revenue requirements of adding Units 1, 2, 3 and 4 to plant in service, and the impact on 1974 rate levels would be the same.

Therefore, it is my opinion that the addition of Colstrip Units 1, 2, 3 and 4 generating plant and transmission lines to the plant in service of The Montana Power Company would increase revenue requirements of The Montana Power Company by $97,240,000. It is further my opinion that to meet these requirements, The Montana Power Company would request upward revenue adjustments of $63,861,000, or a 60 percent increase in 1974 rate levels translated into 1981 revenues, based on The Montana Power Company projections of 1981 KWH sales.

EXHIBIT NO. 7

NORTHERN PLAINS RESOURCE COUNCIL

IMPACT OF COLSTRIP 3 AND 4 ON EXISTING REVENUE REQUIREMENTS OF THE MONTANA POWER COMPANY

	Description	Amount/Ratio	Reference
1.	MPC Investment Units 1 & 2	$135,000,000	MPC, J. Heldt
2.	Carrying Charge Factor	.2463	Westinghouse Report
3.	Revenue Requirements	$ 33,250,000	
4.			
5.	MPC Investment Transmission Line Units 1 & 2	$ 28,000,000	MPC, J. Heldt
6.	Carrying Charge Factor	.16	Westinghouse Report
7.	Revenue Requirements	$ 4,480,000	
8.	Wheeling Revenue	$ 1,000,000	
9.	Net Revenue Requirements	$ 3,480,000	
10.			
11.	Total Investment Units 3 & 4	$669,952,000	MPC, Coldiron Info.
12.	Carrying Charge Factor	.2511	
13.	Total Revenue Requirements	$168,224,947	
14.	MPC Share	.30	
15.	MPC Revenue Requirement	$ 50,467,000	
16.			
17.	Total Investment Units 3 & 4 Transmission line	$202,536,000	MPC Letter, J. W. Ross
18.	Carrying Charge Factor	.1653	
19.	Total Revenue Requirements	$ 33,479,200	
20.	MPC Share	.30	
21.	MPC Revenue Requirements	$ 10,043,000	
22.			
23.	REVENUE REQUIREMENTS SUMMARY		
24.	Units 1 & 2 Plant	$ 33,250,000	Line 3 above
25.	Units 1 & 2 Transmission Line	$ 3,480,000	Line 9 above
26.	Units 3 & 4 Plant	$ 50,467,000	Line 15 above
27.	Units 3 & 4 Transmission Line	$ 10,043,000	Line ~~15~~ 21 above
28.	1974 Revenue Requirements	$ 71,621,000	1974 FPC Form I, p. 41 Col. C., line 37
29.	Total Revenue Requirements	$168,861,000	
30.	Est. 1981 Revenue	$105,000,000	MPC Coldiron Info. and FPC I, p. 414, Col. (f)
31.	Revenue Requirement Deficiency	$ 63,861,000	
32.	Percent increase required	60.8	
33.			
34.	Units 1 & 2 Revenue Requirements	$ 36,730,000	
35.	Megawatt pro-rate	$ 15,170,075	
36.		$ 21,559,925	
37.	Percentage increase required for Units 1 & 2	20.5	
38.	Units 3 & 4 Revenue Requirements	$ 60,510,000	
39.	Megawatt pro-rate	$ 18,208,244	
40.		$ 42,301,756	
41.	Percentage Increase required for Units 3 & 4	40.3	

MR. GRAYBILL: On Mr. Johnson's testimony we've marked as proposed Exhibit 17 his exhibit, and we have a couple of minor changes that you might want to put on your copies, Mr. Bellingham. First of all, on line 27, the line reads, "units 3 and 4 transmission line," and over on the far column on the right the reference should be line 21, instead of line 15. Line 21 is the reference. On line 34, the figure should be 36,730,000, instead of 630,000, so change the 6 to a 7, and on line 36 it should be, therefore, 21,539,000 instead of 439,000, and that changes on line 37 the percentage to 20.5 instead of 20.4 percent. With those changes I'm through.

HEARINGS EXAMINER: Mr. Bellingham.

MR. BELLINGHAM: Well, at this time, we object to the introduction of any testimony of William M. Johnson and in particular the written statement upon the grounds that it's irrelevant, incompetent, immaterial, conjectural, of no probative value; it's speculative, hypothetical, ambiguous, confusing and misleading, and in this connection we might state that this evidence more properly belongs in a rate hearing case, rather than in this particular hearing. It is my recollection that during the testimony of William Coldiron, who previously appeared on behalf of the applicants, that various questions were put to him dealing with similar type information that's contained in Mr. Johnson's testimony, and in those cases the Hearings Examiner did not allow it upon the grounds that I have previously objected to Mr. Johnson's. In short, that it smacked of a rate procedure rather than this case. We further object to any introduction of testimony, and particularly the written statement of William M. Johnson, upon the grounds that it was served upon us on March 5, 1976, long subsequent to the time specified in the order of the Hearings Examiner dated December 10, 1975, in which case paragraph 3 ordered that written statements should be prepared and served by January 10, 1976.

HEARINGS EXAMINER: Very well, objections overruled. You may cross-examine.

EXAMINATION OF WILLIAM M. JOHNSON

Cross, by Applicants

By Mr. Bellingham:

Q Mr. Johnson, you must feel as though you're in a rate hearing case with this type of testimony, don't you?

A No, the testimony would be different in a rate hearing.

Q Well, you'd have a lot more embellishments; you'd go into a lot more detail, wouldn't you Mr. Johnson? What you've done here is more or less taken a shorthand rendition of what you might well use in a rate hearing case? Does that sum it up somewhat, does it?

A Well, the investment would certainly be in a rate hearing and individual numbers that would undoubtedly total up to the carrying charge would be used. One thing would be, of course, when you use a carrying charge on a levelized basis and in the first year that the company would apply, why the rate of return, instead of being 9 percent, it would be around 11½, something like that. But other than that it's generally accepted principles of rate making.

Q Now, you're assuming here, of course, insofar as your testimony is concerned, that 3 and 4 is going to be built?

A Yes, sir.

Q And you also assume in your testimony here that 1 and 2 is an accomplished fact also?

A Yes, sir.

Q Now then, did you consider any alternatives to 3 and 4?

A No, sir.

Q Well, there are possibilities that there are alternatives to 3 and 4, are there not?

A Different sources, you mean, or smaller?

Q Well, possibilities.

A The only alternative I'd know would be there's been some -- I think Senator Metcalf and Jack Corette have both proposed hydroelectric projects over around Plains and that area; whether they're feasible or not, I have no idea, but it certainly would be an alternative source.

Q Well, it is the applicants' position in this case, so there's no misunderstanding on this, that there are no real viable alternatives to 3 and 4 in the time frame, however, let's assume some alternatives that possibly could be advanced. Shall we do that for a second?

A Sure.

Q What if 3 and 4 were not allowed, and assuming that the power that would be produced and generated by 3 and 4 is actually needed. And further assume that Montana Power was able to find a source of electricity in the Pacific Northwest during the time period which it contemplates it's going to be in short supply and as a result it purchased this power from other sources. Now, let's also assume that this purchased power was more expensive than the generation coming from 3 and 4. In that case there would be a greater revenue requirement needed than if 3 and 4 were built; isn't that right?

A Well, if your suppositions are correct there certainly would be.

Q Yes. Now, let's assume and go one step further -- let's assume that 3 and 4 were not built and let's assume that Montana Power built a smaller plant and as a result of building that smaller plant because of economies of scale, and I'm sure you're familiar with that term, the cost of generation was more on the Montana Power system than the generation afforded if from 3 and 4. In that case there would also be a greater revenue requirement need, would there not?

MR. GRAYBILL: Now, just a minute. To which I object. I don't mind Mr. Bellingham's making a lot of assumptions, but he's assuming a lot of facts here which I don't think are borne out by the record. I let the one go by where he assumed that the power would be more expensive from the Pacific Northwest. I think there's actually testimony here that the Montana Power generally buys its supplemental power from the northwest at dump power rates or what would be much cheaper; I'm not trying to change that, but here he's now assumed a set of facts. He's going to build a different plant than is proposed here and he seems to be saying that he wants us to assume that somehow that plant is going to cost more or be more expensive than this plant. I'm not sure that that's true at all and I don't think we should have assumptions in here and conclusions drawn on the record that are not based on something in the record or some plausible explanation that we've at least investigated.

HEARINGS EXAMINER: Overruled. You may answer.

WITNESS: I didn't hear you.

HEARINGS EXAMINER: I overruled the objection and you may answer, sir, if you remember the question.

Q Do you remember the question by now?

A Oh, I think so. If the plant were built on the economy of scale as you say so that the kilowatt hour per function is higher than it would be for 3 and 4, the resulting revenue requirements would necessarily have to be higher.

HEARINGS EXAMINER: I'm not sure if we're getting that on the recorder.

Q Perhaps it would be more convenient at this time if you would answer the question again.

A The question was, if Montana Power should build a smaller plant and because of the economies of scale the kilowatt hour costs would be more than from the larger 3 and 4, would it necessitate additional revenue requirements; is that right?

Q A greater revenue requirement than you've set forth here as far as 3 and 4 is concerned?

A Well, I don't think it would because then you wouldn't have 3 and 4.

Q No, that's right.

A So, there wouldn't be greater revenue requirements; it might be more costly per kilowatt hour.

Q All right, fine. In other words, your answer would be pretty much the same as to my previous question; isn't that right?

A Well, you have to -- you just changed it to say, then, what I have there, and I couldn't answer yes to that.

Q Well, differentiate between --

A Well, I've got 3 and 4 in there.

Q Right. My assumption was that there was no 3 and 4.

A Well, if there's no 3 and 4, I still can't say that it would be more than if 3 and 4 are in. I can say that the unit cost would undoubtedly be higher.

Q Well, my assumption was that the cost, because of economies of scale, per kilowatt hour would be more with a smaller plant than if 3 and 4 were built?

A Yes.

Q And in that case there would be a greater revenue requirement needed than that you have specified in your testimony?

A No.

Q Why not?

A Well, because I've got 3 and 4 in my testimony.

Q Yes, but I mean assuming that it was not; do you see what I mean?

A Well, I can't assume that it's not and then have you ask me if it's going to be more than what I've got in there.

Q Well, I'm assuming, you see, that the cost of a smaller plant would be more as far as the generation is concerned?

A I'm not trying to be argumentative, Mr. Bellingham, but what I'd like to have you do is tell me more than what?

Q More than the revenue requirement in the event that 3 and 4 is built?

A No.

Q You're not in a position to answer the question?

A No way.

Q Well, now going back to the first question put to you, I think you indicated that there was a greater revenue requirement would be needed?

A That's if they purchased power to replace 3 and 4 at a higher rate than 3 and 4 could produce, but that's assuming the same level of power. But if you build a smaller plant, you're sure not going to have the same level of power you would with 3 and 4.

Q Fine. Then let's go at it this way. Let's assume that Montana Power built a plant then, in my second question, from which they would obtain the same amount of generation, do you see, as they would from 3 and 4, but it cost them more?

MR. GRAYBILL: I don't understand the question, Mr. Bellingham. I don't know if the witness does, but I'd like you to rephrase it so I understand it. You've got so many hypotheticals in there now, I'm not sure what we're talking about.

Q As you know, Montana Power gets 30 percent of 3 and 4. Assuming that they build a smaller plant from which they would obtain the same amount, the entire output would equal the same amount as they intend to get from 3 and 4?

A Okay. May I preface my answer what I think your question is?

Q Sure, you bet.

A Okay. If they substituted an individual plant for their portion of 3 and 4, yes, it would be more.

Q And it would cost them more?

A Right.

Q Then there would be a greater revenue requirement needed, wouldn't there?

A Right.

Q Fine.

MR. GRAYBILL: Mr. Bellingham, let me understand the question. But it's assuming that the other plant costs them more; isn't that right?

MR. BELLINGHAM: Right.

Q I'm sorry if I confused you. I started out with what I thought was a comparatively simple question.

A I wasn't confused except I wanted to give you a straight answer.

Q I think we're on the same wavelength finally, Mr. Johnson. Now you, in your approach as indicated in your Exhibit number 17, have figured the costs of generation and the transmission as indicated in your exhibit and as confined to units 1, 2, 3 and 4?

A Right.

Q You have not included any analysis of the Montana Power System as a whole, have you?

A I don't know what you mean.

Q Well, you have restricted your analysis to units 1, 2, 3 and 4.

A In developing costs?

Q Yes, your figures and so forth that you have there?

A Well, we have used actual for the rest of the plant.

Q Now, when you say the rest of the plant, what do you mean by that?

A Everything else.

Q That Montana Power owns?

A Right.

Q Has that been included in your Exhibit 17?

A Yes, sir.

Q In which figures, sir?

A Under line 2, 71,621,000, the 1974 revenue requirements.

Q That is where you included basically the rest of the plant --

A Yes, sir.

Q -- owned by Montana Power?

A Right.

Q You are aware, of course, Mr. Johnson, of the fact that utilities in Montana have a responsibility to provide electrical service to its customers; does it not?

A Yes, sir.

Q At the lowest possible rates?

A Yes, sir.

Q That's what it's charged with by law and I don't think we have any disagreement with that, do we?

A I might have a disagreement with Montana Power's interpretation of that. It isn't what mine is, but basically --

Q That's indicative of every rate hearing case, isn't it?

A Right.

Q And one of the obligations and duties of a utility company is to anticipate future load growth; isn't that right?

A Yes, sir.

Q And all utility companies that you've ever come in contact with, and you've come in contact with a good many, I'm sure, over the years, have separate sections and people that devote their time to analyzing future load growths, don't they?

A Forecasters.

Q Right. Now, at page 3 of your statement you state that, "if rate increases are granted between now and 1981 to satisfy revenue requirements generated from existing plant, the impact from the addition of units 1, 2, 3 and 4 to those 1981 rate schedules would be less." What do you mean by that?

A Well, let's say that because of inflation that in 1978 Montana Power applied for a 10 percent increase and were successful in obtaining it, for inflation purposes only. That would increase the base by 10 percent. Just to use a round number say that the old rate level was 71,000,000 and then it would be 78,000,000, and the impact that I'm speaking of would be that instead of dividing 63,000,000 additional costs of 1, 2, 3 and 4 by 71,000,000, you'd divide them by 78,000,000 and naturally get a smaller percentage increase. The only thing that would change would be the percentage.

Q All right. Now let's turn to your Exhibit number 17, sir, if we may, and on line 2 your carrying charge factor is .2463. Now, where did you obtain that figure, sir?

A The Westinghouse report.

Q Do you remember where in the Westinghouse report?

A Yes, there's a table there that gave the actual dollars and the carrying charge.

Q You can't call my attention to that particular table, what page?

You don't have that with you?

A No.

Q Well then, what does that figure include, sir?

A Depreciation, costs of capital, operation maintenance, fuel, everything that it would take to run a plant.

Q It does include the cost of fuel, does it?

A Oh, yes.

Q Operation maintenance?

A Everything they project that would have to be spent to maintain that unit.

Q And you accepted that figure as it was in the Westinghouse report?

A Yes.

Q Did you analyze the figure to determine whether or not it was correct?

A No. We accepted your investment costs and your generating charges.

Q Now, line 6, carrying charge factor as far as a transmission line is concerned, point 16, I assume you obtained that also from the Westinghouse report?

A Yes, sir. I'm sure we did. This started back in 1974 and then part of your company came up with .1653, so I don't feel we're too far out.

Q We won't quibble about that type of --

A I hope not.

Q When you say your company came up, are you talking about Montana Power?

A Yes, sir.

Q And where did that figure come from?

A Well, we got that on a letter from Mr. J. W. Ross that-- Mr. Graybill asked for information at my request, and Mr. Ross furnished it in letter form.

Q Promptly and fully answered the interrogations, did he?

A Well, I'm never going to say that, but let's say it was satisfactory.

Q All right, fine. He gave you the information you needed --

A I do have a copy of that.

Q But it did give you the information you needed?

A I don't believe he gave everything the first time, and I'm not saying that he deliberately didn't do it. He probably misunderstood the questions so we had to go back to Mr. Coldiron, for instance, on the power projection loads to get that straightened out.

Q But you did get it straightened out?

A Oh, yes, we had no problem getting the information.

Q Well, turning to line 6 again, the Westinghouse report reference, I assume you do not have that reference with you either, the same as you do not have item 2 --

A No. Have you ever seen one of those?

Q Yes, sir, quite often.

A I can barely lift it, let alone carry it.

Q Was that in the same table, was it, sir?

A No. The transmission, if I remember correctly, is in the back of the book. The other is in the front.

Q And what does it include, that particular figure, the same as you've previously testified?

A Well, I think the major difference is that, of course, there is no fuel cost, which if I remember correctly -- if you don't mind if I take a moment here. Fuel is 7.22 percent, so if you put that on you're up to 23, so it's basically the same carrying charge as what you're using on the generating station.

Q What did you refer to, sir, when you referred to some figures just now?

A That was the letter from Mr. Coldiron.

Q I see. What is the date of that letter, sir?

A Well, it isn't a letter. September 10, 1975 is the date on it. And this on the bottom, WHVPO, whoever that is -- but Mr. Coldiron delivered it to Mr. Graybill.

Q Well, insofar as the carrying charge factor at line 6, would you say that it includes all of the items that the factor does at line 2, with the exception of fuel costs?

A Yes. Another factor in the variation there is the fact that you have a 60 year life on your pole lines, where your generating station is 37 years, so you would have a lower depreciation factor in your carrying charge.

Q You used a longevity of 37 years as applied to the generating units themselves?

A Right. They used 60 years on this --

Q Right, and where did you obtain those figures?

A They're listed back here in an old report that Montana Power furnished.

Q And you accepted those figures as such and the information they furnished you?

A Yes.

Q You didn't independently corroborate them or check them out?

A I looked at them generally and they satisfied me.

Q All right. Line 12, point .2511, carrying charge factor, as far as units 3 and 4 are concerned, where did you obtain that information?

A That was from this information furnished by Mr. Coldiron and in fact he even computed it out for us to the 168,000,000 revenue requirements.

Q And you accepted those figures, did you?

A Yes, sir.

Q And does that include the same factors and items as number 2 does?

A As Mr. Coldiron explained -- you don't mind if I say Coldiron because I don't know if it's Coldiron that's doing this, but whoever --

Q Yes, sir, we understand.

A Mr. Coldrion explained that there was a variation between the Westinghouse and theirs and was due to an increase in the cost of capital in the 25 projection where Westinghouse had used 12 percent for equity and 8 percent for debt, and this .2511 percent had been used for equity.

Q And what figure did you use for equity, 15 percent then?

A We used the.2511 which included the 15.

Q All right, fine. That was included in the 25, fine. All right, line 18, carrying charge factor investment, units 3 and 4 transmission line, and I assume that you obtained those figures also from Montana Power; is that right?

A Yes, sir.

Q And did you independently make an evaluation of those figures yourself?

A I accepted them. You see, these are used quite frequently in the trade and we have a general knowledge of what they should be. Now, I shouldn't say that 6.53 is any more correct than 6.43, if you'll follow me, but it's in the ball park.

Q So for the purposes that you utilize them, a small discrepancy doesn't make any difference as far as you're concerned?

A No.

Q Now then, let's turn to line 11, and you're using there a total investment for units 3 and 4 of $669,952,000; are you not?

A Yes, sir.

Q And that is basically the cost of units 3 and 4?

A Yes, sir.

Q Now, when did you obtain that particular figure?

A September 10, 1975.

Q Were you aware of the fact that those figures have gone up since then?

A I was aware of the fact that the projections are up. I was aware of the fact that the Department of Natural Resources is projecting some $82,000,000 over the 202, but we preferred to keep this just as conservative as we could. We had this in writing. We had nothing else in writing.

Q Well, did your counsel or anybody tell you that in Applicants' Exhibit 104 introduced in this case, that the cost estimate of units 3 and 4 for the 1980 and 1981 schedule is $776,059,000?

A No.

Q You have never seen that?

A No.

Q Were you aware of the fact that the units have slipped and have been postponed from 1979 and 1980 respectively to 1980 and 1981?

A No, sir.

Q You weren't aware of that?

A I beg your pardon. I think I anticipated it. From where to where?

Q Well, one was postponed from 1979 to 1980 -- excuse me, 3 was postponed from 1979 to 1980 and 4 was postponed from 1980 to 1981.

A Well, I can't say I was; I can't say I wasn't, but we used 1981 load projections so I assume we were aware of it.

Q Well, this particular postponement or slippage was not made until the latter part of 1975?

A Well, then I'm not aware of it.

Q All right. So your figures, then, are the older figures that you've included in Exhibit number 17; is that right?

A Yes, sir.

Q Fine. And if you use the current and most recent figure that I have indicated, this would change the figures, of course, in your exhibit, wouldn't it?

A It would raise the revenue requirements.

Q Yes, but the figures would change, wouldn't they?

A Certainly. If you change any figure in here, the figures are going to change.

Q Okay. Now, calling your attention to line 17, and you have a total investment for units 3 and 4 transmission line of

$202,536,000?

A Right.

Q And where did you obtain this figure, sir?

A That was from Mr. Ross' letter.

Q Fine. And that was back in September of 1975 also, was it, approximately?

A May.

Q May of 1975. And are you sure this is the current and most recent figure?

A I have no idea.

Q You are not aware, and it has not apparently been called to your attention, that Applicants' Exhibit 105 in this case gives a figure of $214,688,000 insofar as the investment for units 3 and 4 transmission line is concerned? You are not familiar with that figure?

A No. The only one I'm familiar with is the one that the Department of Natural Resources furnished to me for $282,000,000 I believe it is, something like that, their estimate.

Q Well, if that figure on line 17 was changed to accord with the current and most recent figure, that would change, of course, the calculations and the figures in Exhibit 17?

A It would make the revenue requirements higher and the percentage increase higher.

Q Now, line 35, the revenue requirements, and incidentally that figure $36,630,000 --

A 730.

Q Well, that's been changed, hasn't it?

A Yes.

Q When did you find that there was a mistake made?

A As soon as I rechecked the typing.

Q Was that a typographical error?

A Well, let's say so. No, it was simply -- did you ever see trifocals? That's the reason for the error. I misread a number.

Q Then you're not going to use the time-honored lament of attorneys and blame everything on your secretary? You're going to say it was your own fault; is that right?

A I'll take the onus for that one.

Q Now, at line 35, you've got megawatt prorate of $15,170,075. What is the source for this data?

A Well, when we came up taking your power projections, we came up with a number of what the revenues would be, and it was $105,000,000. The old revenues for '74 were $71,000,000 so we came up with a difference of $33,379,000. Now, I attributed all of that to 1 and 2 and 3 and 4 in order to apportion it. I merely took the megawatt rating of 1 and 2 and 3 and 4 and developed a percentage to prorate it.

Q Are we talking about kilowatts here?

A No, these are dollars.

Q All right. Megawatt prorate?

A The megawatts were used as a prorate basis.

Q And you also have megawatt prorate at line 39. I assume that your response to my previous question that I put to you as far as line 35 is concerned would be the same?

A Same thing, sir, yes.

Q Do you in general reflect fuel costs as a percent of the plant when the plant costs in generation in particular vary?

A You do when you're using a carrying charge, yes.

Q Did you in this case?

A Oh, yes.

Q Do the fuel percentages you have used in this case reflect 1981 coal prices?

A I believe -- if you can give me a minute, I can read you --

(pause while witness searches papers.)

A Your explanation was fixed and variable O and N, A and G, and fuel assumed to escalate at 4 percent compound from 1979 levels into the future.

Q And you used that figure?

A Yes, sir.

Q Now, when you say "your figures," you're talking about Montana Power's figures; is that right?

A Everything except the calculation itself was Montana Power figures.

Q All right, fine. So you have reflected 1981 coal prices in that?

A Yes, sir.

Q On an escalation factor --

A 4 percent compounded annually.

Q Do you know whether or not units 1 and 2, when they come on line, are going to replace existing power contracts and sources between Montana Power and third parties?

A I don't know why they would. I would hope not. You mean input or output?

Q Input. I'm talking about importing electricity, present contracts between Montana Power and third parties?

A Well, as I understand it, they don't have any left.

Q What do you mean?

A They testified in one rate case that most of the contract expired with Bonneville, for instance. It's either expired now or is going to expire in the next year or so. But I think it's safe to assume that 1 and 2 will replace that purchased power.

Q That's your understanding?

A Yes.

Q What about 3 and 4, do you know?

A Well, I would hope that if you build 1 and 2, that by the time 3 and 4 get on the line, you're not importing power anymore, but that's a real conjecture.

Q Have you reflected any reduction of purchased power on the revenue structures in your analysis at all?

A No, because the replacement would be higher.

Q Is that the reason for it?

A Yes.

Q Well, when we talk about rate changes, Mr. Johnson, we're talking about something that is beyond the power or the scope of authority of the Board of Natural Resources, isn't it?

MR. GRAYBILL: To which I object as stating a legal conclusion, which is certainly not within the province of the witness nor the attorney, and I don't think it's necessarily a correct statement of the fact.

HEARINGS EXAMINER: Overruled. He's an expert; he can explain probably as well as we lawyers can.

Q Your answer, I believe, was --

A Well, while my counsel's objecting, I'll change my answer that I know of no legal authority for the Board of Natural Resources to set rates.

Q Fine. And where does that authority lie?

A Public Service Commission.

Q Of the state of Montana?

A Yes, sir. Well not --

MR. BELLINGHAM: No further questions.

WITNESS: Well, if you're through, I am.

MR. BELLINGHAM: That's all right, if you want to --

WITNESS: Well, no, there is one segment of your sales that's regulated by the Federal Power Commission.

Q But generally speaking it's the Public Service Commission's function, is it not?

A Yes.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Mr. Graybill.

Redirect, by Northern Plains Resource Council

By Mr. Graybill:

Q Well, let's start where we left off just to clear this one little point up. The Siting Act, Mr. Johnson, does enjoin upon the Board of Natural Resources the duty of saying that the proposed facility is in the public interest and the phrase "public interest" is certainly broad enough to at least encompass the idea that cost of electricity to Montanans might possibly be an issue of public interest; isn't that true?

A It is, yes.

Q All right. Now, let's go back and examine some of the things that Mr. Bellingham asked you about. My understanding -- I'd like to just review here with you some of the things you said to him. I understand that you've prepared an exhibit here, number 17, to show the impact of Colstrip 3 and 4 on existing revenue requirements. In other words, it's to show how much additional revenue is going to be needed, and you've translated that into a percentage of increase that would be needed in their revenues; isn't that right?

A Did you say 1, 2, 3 and 4?

Q Well, 1, 2, 3 and 4.

A Right.

Q And part of it, of course, is 3 and 4.

A Right.

Q And I guess I understand the sum and substance of your testimony to be that contained in line 32, where 1, 2, 3 and 4, all four of them, based on your calculations, it would require a 60.8 percent increase in revenue in order to properly build and finance these plants as proposed?

A It would be a 60.8 percent revenue requirement, yes.

Q The revenue would have to be raised that much above what it is in 1974, isn't that the idea?

A Yes, sir.

Q All right. Now, in computing this, it's my understanding that you told Mr. Bellingham that you have used information, dollar information and that sort of thing, all from Montana Power and the applicants' exhibits or from their letters; isn't that right?

A Yes, sir.

Q In other words, you haven't attempted to determine what the financial information should be; you've taken whatever they gave you as the financial information; isn't that so?

A Yes, sir. I've reviewed it for reasonableness, you might say. It was all within the zone of reasonableness.

Q And wherever there was a question, you resolved that question in favor of being conservative in attempting to analyze it carefully and conservatively; isn't that right?

A Yes, sir.

Q All right. Now, the sources of the information were a series of inquiries that you and I made to the Montana Power in two or three different stages; isn't that right?

A Yes, sir.

Q That's what you've referred to as the Ross letter and the Coldiron memorandum, and what you have done, then, is take figures that the Montana Power Company has supplied you as the costs of units 1 and 2 and 3 and 4; isn't that so?

A Yes, sir.

Q Now Mr. Bellingham pointed out to you that the applicants have now in Exhibit 104 actually admitted that these plants are going to cost more than the figures you used, but the figures you used are figures that were supplied by the applicant companies; isn't that true?

A Yes, sir.

Q And if, in fact, on line 11, the total plant cost for units 3 and 4, has gone up from $669,000,000 to $776,000,000 as Mr.

Bellingham says and as Exhibit 104 shows, that would mean that somewhere in the neighborhood of $107,000,000 more in revenue would be required to build that plant, right?

A No, sir.

Q How much more?

A Well, how much did you say, 100 and something?

Q Well, the figures supplied by Mr. Coldiron were $669,000,000 for the plant construction of 3 and 4, and the figures in Exhibit 104 show $776,000,000. That would be $107,000,000 --

A Okay. The revenue requirements would be, well, I guess $100,000,000 difference; is that what we're talking about?

Q Right. $107,000,000 difference.

A It would be about $7,000,000 in round numbers.

Q And then in line 17 Mr. Bellingham pointed out that while we used, on your exhibit here, $202,000,000 for the cost of the transmission line, that the companies now believe in Exhibit 105 that the transmission line is going to cost $214,000,000. So, in other words, there's another $12,000,000 there?

A $12,000,000 additional plant costs. That would be maybe a million --

Q So, what you're saying is -- I think you said -- what did you say for the first one, 5 or 6 million?

A 7.

Q So, what you're saying is that if Mr. Bellingham -- well, not Mr. Bellingham -- if Exhibits 104 and 105 are right, and the plants really cost about $115,000,000 more, that it's going to raise the revenue requirements by about 7 or 8 million dollars above what you show here; isn't that right?

A Yes, sir.

Q So the effect of the differences would be to increase the percentage of increase required of the revenue, right?

A Yes, sir.

Q And did you take into account -- did you adjust these figures for inflation?

A No, I adjusted nothing. I took what I was given and used them.

Q So that if, in fact, there was further inflation, that might tend to raise the figures slightly also?

A Well, they took care of that when they came up with a carrying charge.

Q In other words, this cost increase of 4 percent compounded annually is an attempt to wrestle with inflation, is that it?

A Yes, I think it's a good one, really.

Q So that what you're saying is that the figures supplied by the power company themselves, and that's reflected in the carrying charge figures, I take it you're saying --

A Yes.

Q -- has attempted to estimate and the estimation was by the power companies, not by you, what the likely inflation would be during the construction of the plants? Or construction and operation of the plants?

A It would be an attempt, as I read it, for the life of the plant.

Q All right. So what we're doing here, then, if I understand it correctly, is we're taking the amount of money that was invested in Colstrip 1 and 2, and adding the amount of money that -- and that's both for the plant and for the transmission line. There's two parts of each of these, the plants and the transmission line; isn't that the idea?

A Yes.

Q And then we're adding to that the plant and the transmission line costs as we estimate them for 3 and 4, so that we get a total cost of the four plants, and then you are segregating out, are you not, Montana Power's share of that when you take the 30 percent on line 20?

A Yes, sir.

Q And we did the same on 1 and 2, so that what we end up with is that the Montana Power's revenue requirements for its share of these plants is reflected in the exhibit; isn't that so?

A Yes, sir.

Q And then Mr. Bellingham asked you a question about whether the rest of the plant, the rest of the system that Montana Power Company owns, is reflected here, and you pointed out to him that on line 28, you have what's titled "1974 Revenue Requirements." What you're saying is that you took a year that was completed and -- I see that's taken from their Federal Power Commission reporting forms. You took a year that's completed and showed what they needed that year to cover their revenue requirements on all the plant as it existed at that time; isn't that so?

A Yes, sir.

Q And so you assumed that since they had completed that year and shown that year's figures, that that was the revenue requirements they needed to cover that plant that was in existence at that time?

A I went even further on that one and checked the rate of return that that produced and, in my opinion, it was a satisfactory one.

Q So that line 28 has the effect of adding into this chart all of the other plant that the Montana Power Company had just prior to putting 1 and 2 and 3 and 4 into the equation, right?

A Yes, sir.

Q And then on line 31, you show the revenue requirement deficiency for the Montana Power Company which translates, is that not true, into the percentage of 60.8 percent on line 32?

A Yes, sir.

Q Now that 60.8 percent revenue deficiency covers both -- well, covers all four units, 1, 2, 3 and 4; isn't that so?

A Yes, sir.

Q But it covers it conservatively because the companies have already indicated the plants are really going to cost more than the first initial figures they gave us; isn't that also so?

A Yes, sir.

Q Now then, the purpose of lines 34 to 41 is, as I understand it, to break out the amount of this revenue deficiency that's accountable to units 1 and 2 as against the amount that's accountable to 3 and 4; is that correct?

A Yes, sir.

Q And that's where you use your megawatt prorate to decide how much of the power was being produced by each of the various units, and then divided the percentage roughly 20/40; isn't that right?

A Yes, sir.

Q So Exhibit 17 then stands for the proposition that units 3 and

4 would cause an increase in revenue requirements of 40.3 percent?

A Yes, sir.

Q Or that the present rate structure would supply a deficiency of revenue by a factor of 40.3; is that right?

A Yes, sir.

Q Now, I believe Mr. Bellingham asked you about some alternatives and the fact is that we really only asked you to calculate what the revenue requirements would be for the plants as proposed by the applicants here; isn't that true?

A Yes, sir.

Q You really didn't do any mathematics or any calculating or any assuming as to what other alternative arrangements could be made, then?

A No, sir.

Q So that while Mr. Bellingham asked you a series of questions about what might transpire with some assumptions in them, you really haven't collected the information or done the calculating that would result in a close estimate of what an alternative revenue requirement might be?

A No, sir.

Q Nor do I understand have you added any elements to these figures supplied by the power company, except your ability as a calculator, that is the mathematics of it, and your knowledge of the methodology for finding revenue requirements?

A That is correct.

MR. GRAYBILL: That is all.

HEARINGS EXAMINER: Mr. Bellingham.

MR. BELLINGHAM: I have just one question, sir.

Re-cross, by Applicants

By Mr. Bellingham:

Q You estimated in your mind as to what the increase in revenue requirements would be if the current figures for the cost of transmission line in units 3 and 4 were utilized. Do you remember that? Around 7 or 8 million I believe?

A Yes.

Q And that was calculated in your head?

A Yes, sir.

Q Did you include only Montana Power's 30 percent share in that?

A Yes, sir. That's why it took so long. I had to take 30 percent and then apply that carrying charge.

Q The estimate is a rough guess, is it not?

A Yes, in fact now that you mention it I was wrong on the transmission because I took a fourth and I should have only taken 16 percent. I'll change that number to 800,000 instead of a million if you want to.

Q Well, that's 200,000 or so difference. Every little bit helps.

A I'm sorry about that, but I just automatically took a fourth of both of them and it shouldn't have been.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Anything further, Mr. Graybill?

MR. GRAYBILL: No, that's all.

HEARINGS EXAMINER: Very well, you're excused, sir, and thank you for your attendance.

(WITNESS EXCUSED)

MR. BELLINGHAM: May I have a few minutes, sir?

HEARINGS EXAMINER: I wanted to ask Mr. Graybill if this concludes the case-in-chief of the Northern Plains Resource Council?

MR. GRAYBILL: Well, if Mr. Bellingham is going to take a few minutes, I'll review that with my staff and find out if it's going to be all.

HEARINGS EXAMINER: Are you going to cross-examine the next witness, Mr. Bellingham?

MR. BELLINGHAM: Yes, sir.

HEARINGS EXAMINER: Very well, we'll take a brief recess.

(BRIEF RECESS AT 10:00 A.M.)

Following a brief recess, the hearing reconvened at 10:08 A.M. on March 16, 1976.

HEARINGS EXAMINER: Mr. Haddon.

MR. GRAYBILL: Mr. Hearings Examiner, I would at this time, if you'll let me interrupt, I would rest on behalf of the Northern Plains Resource Council and point out, in case you're keeping score, that testimony that we'd originally scheduled by Knute Hereim and by Norman Voldseth is withdrawn. We didn't bring those two people in, but the rest of them we did.

HEARINGS EXAMINER: Very well, then the record will show that your exhibit, Northern Plains Exhibit number 17, is admitted.

MR. GRAYBILL: Oh, yes, I would kind of like that in, thank you.

HEARINGS EXAMINER: Mr. Haddon.

DR. ERNST R. HABICHT, JR., called as a witness by the Environmental Defense Fund, Inc., having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF DR. ERNST R. HABICHT, JR. WAS DIRECTED TO BE INSERTED AT THIS POINT.)

STATEMENT OF TESTIMONY OF
DR. ERNST R. HABICHT, JR.

I. BACKGROUND AND PREFACE

My name is Ernst R. Habicht, Jr., and I am employed by the Environmental Defense Fund, Inc. (EDF) as Director of the EDF Energy Program. EDF is a nationwide coalition of scientists, lawyers and economists dedicated through litigation and involvement in administrative governmental proceedings to the preservation and improvement of environmental quality. It is supported by an active membership of some 38,000 citizens. My concerns lie with energy technology, economics and environmental impacts and I have been particularly involved in the analysis and reform of pricing policies of regulated energy suppliers, principally the electric and gas utilities of the United States which together consume and deliver over half of all the energy in the U.S. economy.

I graduated from Harvard College in 1960 with an A. B. in chemistry. In 1967, I received a Ph.D. in chemistry from Stanford University. Since joining the Environmental Defense Fund as a staff scientist in 1971, my primary focus has been in the area of energy technology and economics. I have written and testified extensively with respect to these matters, and a representative list of my publications and testimony would include the following:

1. "The Northern Plains Coal Resource - Case Study in Public Non-Policy" in Energy: Demand, Conservation and

Institutional Problems, edited by Michael F. Macrakis, The MIT Press, Cambridge, 1974.

2. "The Social Origins and Economic Basis of the Demand for Electricity," a paper published in the Proceedings of the New Zealand Energy Conference, the University of Auckland, May 25, 1974.

3. "Towards Resolution of a Conflict Between Energy and the Environment" presented at the Conference on the Measurement of Social and Economic Data and Public Policy, the University of Texas at Austin, April 10-11, 1975 (to be published).

4. "Energy-Intensive Industries Facing the Prospect of Peak-Load Prices" in Energy Research Reports, Vol. 1, No. 1, May 1975.

5. "The Energy Puzzle: Electricity Rates, Space Conditioning and Load Management" in Load Management, Conservation Paper No. 24: The Proceedings of the Conference on the Challenge of Load Management, June 11-12, 1975, Office of Utilities Programs, Federal Energy Administration.

6. "Common Goals for Power Producers, Users" in The Commercial and Financial Chronicle, August 18, 1975.

7, Testimony before the New York Public Service Commission in Case No. 26402, defended in August 1973.

8. Testimony before the Atomic Energy Commission in Docket No. 50-410, defended January 1974.

9. Testimony before the Federal Power Commission in

Docket No. CP-73-131, defended February 1974.

10. Testimony before the Senate Public Works Committee, presented May 7, 1975.

11. Testimony before the Colorado Public Service Commission in I~~E~~&S Docket No. 935, October 1975.

12. Testimony before the North Carolina Utilities Commission in Docket No. E-100, Sub 21, defended December 1975.

13. Testimony submitted to the Iowa State Commerce Commission in Docket No. U-546, January 9, 1976 (to be defended).

In addition, I have held the following advisory positions and consultancies:

1. Atomic Energy Commission (now ERDA), Fall 1973.

2. Oak Ridge National Laboratory, 1974 to 1975.

3. The Energy Advisory Committee of the Governor of the State of New York, 1974-1975.

4. Office of Technology Assessment, 1975.

5. Member, Citizens Advisory Committee to the Chairman of the New York Public Service Commission, 1975 to present.

6. Federal Power Commission, National Gas Survey, Transmission, Distribution and Storage - Technical Advisory Task Force - Rate Design, 1975 to present.

Essential to an adequate explanation of my testimony is a statement of the goals and premises of the EDF Energy Program which I direct. The purpose of this program is to minimize the total social costs of energy to society. This we can do by

(1) insuring that insofar as is possible energy consumers pay a price for energy that accurately reflects its marginal cost of supply and (2) making certain that this nation minimizes the total social cost of new energy supplies. If these goals are achieved, environmental damage will be minimized, consumer costs will be decreased, employment will be increased, and the efficiency of capital utilization will be increased. This points to a central feature of our approach; namely, that there is a broad identity of interest between those concerned with protecting the environment, American consumers, the American labor force and those who invest in our economy. That such an identity of interest can exist (much less that it has been greatly strengthened in recent years) is at best poorly understood even by energy specialists.

II. PRICING POLICIES OF UTILITIES

Starting about four years ago, we selected electric utilities as most deserving of our attention because of their dramatic impact upon the environment and their increasing importance as a component of energy, consumption and supply for end use in the U. S. economy. We were convinced that the pricing policies of electric utilities were perverse with respect to the environment, electric consumers both large and small, investors in electric corporations and regulators as well. We have repeatedly argued with increasing success that it is in the common interest of this rather disparate array of concerns to pay the closest attention to the need to reform the tariff design of regulated firms. Thus, we argued that if electricity prices were premised on considerations of marginal cost, the damage to environment would be minimized, consumers in the aggregate would pay lower prices for electricity, net earnings would be stabilized and the ever increasing frequency of regulatory proceedings would be abated. In addition, the need for new capital-intensive generating plants would be meaningfully reduced.

Our first notable success came on August 8, 1974, when the Wisconsin Public Service Commission adopted our arguments in Case No. 2-U-7423 involving the Madison Gas and Electric Company. As a result of that decision, all of the electric corporations in Wisconsin are now moving to implement time-of-day pricing. Other states, most notably New York, North Carolina, California, Vermont, Florida, and Michigan, have implemented this concept or are performing certain experiments preliminary to implementation, in part as a result of our pioneering endeavors and direct involvement in proceedings before numerous regulatory bodies. Significantly, the Federal Energy Administration is now a strong advocate of such pricing structures.

The principles of marginal cost pricing are germane to the issues posed in this proceeding. In assessing the basis of need for Colstrip Units 3 & 4, the Montana Utility Siting Act permits the Board to consider "the nature and economics of the various alternatives" to such a massive commitment of capital and resources. It is submitted that one fundamentally sensible alternative for the applicants and for the Pacific Northwest is to begin pricing electric power so as to make the most efficient use of existing capacity. This necessarily dictates seasonal differentials where warranted and time-of-day price differentials where the metering costs associated with time-of-day pricing are equal to or less than the benefits that would flow from tariff reform. Additional steps by electric corporations should include the broad application of management of connected electrical loads, especially where such load management practices create little or no degradation of the quality of service. Such reforms are clearly gathering momentum. Even a casual reading of the technical or lay press will reveal growing support for marginal cost pricing in the electric sector evidenced by consumer groups, financial analysts, environmentalists, regulators and even certain large electric customers.

The basic concept underlying such reforms is that consumers should pay the full cost associated with their consumption. But this is not to be interpreted as a "no growth" philosophy; rather, electric customers will receive price signals that apprise them of the strong time dependency of cost of provisioning service. Inter- and intra-customer subsidies will be minimized and, for the first time, customers will have the opportunity to diminish or defer their demands and receive savings associated therewith without being subsequently penalized by "conservation" rate increases.

The applicants should begin to implement tariffs which directly reflect the marginal cost of providing service at various times, places, voltage levels and other cost-determining parameters. In general, the proposition is that the price charged for an additional kilowatt-hour of electricity ought to reflect the additional costs to the utility of producing it. Since the structure of marginal costs can be quite complicated in comparison to the acceptable degree of complexity of tariffs, tariffs should reflect the main elements and sources of variation in marginal costs.

The purpose of basing rates on marginal costs is to ensure that the price signals which consumers receive are sensible. That is, since prices have incentive effects to which consumers respond, those prices should convey incentives which reflect the costs (or savings) to the utility of the consumer taking a bit more electricity or a bit less. The incentive to reduce consumption should be high when the costs are high, and low when the costs are low. Here we should note the importance of treating consumers individually. Tariffs cannot possibly convey appropriate signals if the costs (or savings) resulting from a particular consumer's decision to increase or decrease consumption of electricity are spread over thousands or millions of other customers in the same class.

Many people use the terms "marginal cost pricing" and "peak load" pricing synonymously. In general, the synonym is appropriate because the most important determinant of the marginal cost of electricity is usually the timing of consumption. However, tariffs could vary by time of day and yet not reflect marginal costs. Similarly, the expression "peak load pricing," as used by economists, implies pricing according to the peak of electricity usage in relation to available supply. In addition, there are other important elements of marginal cost besides the respective levels of demand and capacity. The term "marginal cost pricing" is more precise, even if it is intuitively less descriptive. Utilities generally possess, at this time, the information necessary to determine and price the structure of marginal costs. Much of the information necessary to determine marginal costs is already routinely gathered by utilities for purposes of planning system expansion and for efficient scheduling and dispatching of generating equipment. To that extent, the calculation of marginal cost is a matter of asking the right questions of the right people.

The process is basically a cooperative venture between economist and engineer. It has not been done very often in the U. S., but European countries and certain of the Commonwealth nations have for some time successfully premised their pricing on marginal cost principles.

Time-of-day pricing should not be implemented immediately by the applicants for *all* of their customers, because there are metering costs associated with time of day pricing which must be weighed against the expected benefits. For lower volume consumers the costs of the extra metering may exceed the benefits. The applicants, in conjunction with the appropriate regulatory commissions, should exercise their judgment in determining the appropriate pace and scope of implementation of time of day pricing.

There are at least two possible approaches to the problem of implementing marginal cost pricing in these circumstances. One is to conduct experiments to determine expected consumer response to time-differentiated tariffs; the other is to introduce time of day rates through a process of staged implementation. In either case, two things ought to be kept in mind. One is that information is not free, and the price of perfect information is infinite. Another is that there are inherent costs of delaying the implementation of marginal cost pricing. Present pricing practices induce inefficiencies in the production and consumption of electricity. The longer we defer adopting tariffs which convey sensible and appropriate signals to consumers, the longer we will continue to incur these costs. One of the most significant costs of delay is the more immediate need for huge and expensive generation facilities such as Colstrip Units 3 & 4.

The costs of delay while we procrastinate about further experimentation will be considerable. Utilities such as the applicants will incur hundreds of millions of dollars of costs for new capacity, some of which would not be needed if consumers were advised of the actual additional cost. In addition, consumers will continue to invest in appliances and equipment which are not designed as they would be with time of day tariffs under a marginal cost-based tariff design. It should be remembered that even assuming the experiment is well designed it may not yield much more than we already know or of which we are reasonably certain. For example, some of the effects of marginal cost pricing will not be evident for several years (depending in part on the turnover rate of appliances and equipment), and these effects will not be revealed by a shorter-term experiment.

It is especially important to realize that experimentation is not necessary in the case of certain large consumers, e.g., those already equipped with recording demand meters. The question to be resolved by experimentation is whether expected benefits exceed costs. Since recording demand meters already provide the requisite billing information, costs are virtually zero and there is no need for experimentation.

Reformation of electricity tariffs is important to these hearings for several reasons. First of all, the incremental environmental costs of generating electricity on-peak are substantially greater than off-peak. Electric corporations must rely more heavily on their oldest, dirtiest and least efficient units during periods of maximum demand. Also, new generating capacity to meet growing peak period demands can have higher than average environmental costs. A good example of this is provided by pumped storage hydropower capacity which should not be constructed until and unless tariff designs are premised upon marginal costs and the need for such facilities can be demonstrated pursuant to the readjustment of customer demand patterns.

Secondly, there will be an obvious inducement for energy-efficient total energy installation where these are economically justified. Such installations are most likely to be deployed in new construction where customers reasonably expect to consume power principally during periods of high system demand or at least to have little or no diversity from the system as a whole. Contrariwise, total energy installations would be discouraged where the user had a high degree of diversity. When the cost experience of the supplier and user are in accord, efficient decisions will result to our aggregate benefit.

Thirdly, insofar as the demand for new generation capacity can be abated even temporarily through the spreading of electrical loads, we are presented with an opportunity to buy time. This would permit us to capture more efficiently the benefits of our recent dramatic increase in electricity supply research, development and demonstration investment. In so doing, we can avoid over-commitment to present unreliable, dirty and inefficient available in the last few years largely as a result of innovative grants for study provided by the Research for National Needs Program of the National Science Foundation. Pertinent studies regarding the efficiency of room air conditioners have been performed at Oak Ridge National Laboratory by David A. Pilati, John C. Moyers and others whilst an interesting analysis of the efficiency improvements attainable for a refrigerator was recently provided in an article entitled "Energy and the Refrigerator" by George C. Newton, Jr., in the January 1976 issue of Technology Review published by the Massachusetts Institute of Technology.

There are two types of appliance acquisition pertinent to this discussion. The first of these is the acquisition of a new appliance heretofore not owned by the consumer. Such acquisitions take place as consumers become more affluent or stem from their social decisions (such as changes in marital status and number of offspring or a move from one housing unit, city or region to another). Such decisions are also influenced by the arrival of better engineered appliances as well as the appearance of whole new lines of electrical equipment.

The second type of consumer acquisition that we must consider becomes ever more important as the saturation of ownership of a given type of appliance increases. This is the category of replacement purchases where the consumer decides that increasing maintenance costs for appliance, the arrival of a superior appliance technology or the catastrophic failure of an appliance justifies replacement with a new (or more attractive used) device. Part of the utility system's planning function is to carefully delineate those appliances which are in use in the firm's service territory as well as the rates of increasing saturation and replacement. Thus the utility frequently is a unique repository of such data which it has amassed in the past in order to provide a more accurate estimation of electrical load growth. However, a consumer may buy an inefficient refrigerator when electricity rates are quite low and might rethink this consumption strategy if the price of electricity were to double or triple. That is to say, it might actually be economically efficient (i.e., cost reducing) for the consumer to get rid of the appliance (simply junk it, as it were) well before it broke down and replace it with a far more efficient device. This suggests that the present rate of appliance replacement may likely be lower than the optimal rate.

Normally, consumer information and decisionmaking is very poor with what might be considered to be economically optimal, i.e., relatively few consumers actually follow an optimal strategy. Instead, when electricity prices rise, they simply run the appliance less frequently--and extend its effective life--in order to save money in the near term. Only the very best informed consumers are likely to tear out an appliance if it suddenly becomes very expensive to run and replace it with a more efficient device so as to minimize costs. Obviously, a consumer who is contemplating acquiring an appliance for the very first time is not faced with this dilemma. Rather, that consumer's problem is to intelligently decide amongst the vast array of competitive devices so as to minimize costs and has the distinct advantage of being unencumbered with past investment decisions.

The More Efficient Refrigerator

It is possible to make direct comparisons of the cost of various strategies which are available to informed consumers. Take, for purposes of example, the more efficient refrigerator. Proceeding from George Newton's calculations described in the Technology Review article cited above, the savings in energy consumption can be calculated. Newton believes that six fundamental changes in refrigerator design would reduce the consumption of the appliance he describes from 1840 kilowatt hours per year to 850 kilowatt hours per year. He assumes a $.03 per kilowatt hour cost of electricity to that consumer yield annual savings of $29.70, should the efficiency improvements be made. Over the 14-year life of the appliance this would amount to over $415. Employing a 10 percent discount rate, the present worth of this stream of savings is $225. Interestingly, Newton points out that:

> Amana offers two models in this size that are almost alike except one has an energy consumption of 192 watts and the other, 121 watts, because of better insulation and other improvements. As of 1975, the

> first model is available for $440 and the second, $550 delivered in the Boston area.

Regulatory Significance

A fundamental goal in the regulation of monopolies is to produce that outcome which would obtain were the commodity being regulated actually supplied in a competitive market. However, one aspect of regulation of electric corporations is not generally well understood. Regulators must wear the hat of electric customers as well as the hat of the stockholders of the utility under regulation. It is generally perceived by regulators that these two hats have considerable identity of interest. For example, a common argument for raising the price of electric power today and hence raising the return on common equity is to permit the utility to compete under more favorable terms for capital (e.g., in the bond market) so as to hold down the future costs of electric power. This circular argument is perfectly valid within the narrow confines of conventional utility system investments in electricity supply and the stream of services they now provide to their customers. The problem arises when we look beyond the high walls but narrowing boundaries of the electric utility sector itself.

If society--through the process of utility regulation--is constantly insuring that adequate amounts of capital flow to electric utilities, should we not impose an equal obligation to insure that an adequate flow of capital is presented to electric consumption strategies which permit consumers to decide between taking a bit more electricity or improving the efficiency with which they use that commodity? This is not merely a rhetorical question since there is exceedingly good evidence that consumers are making increasingly poor decisions in the acquisition of their stock of electrical appliances. I am worried primarily about the small commercial and residential classes of electric consumption since I am relatively confident that large consumers of electric power are far more capable of minimizing costs and operate with far better information and greater access to capital markets than others. That is to say, consumers have inadequate information and inadequate access to capital so as to minimize the costs associated with their direct consumption of electricity.

Such was not always the case. In the more benign years when electricity costs consistently fell with increasing production and consumption, there was far less need to worry about this dilemma and markets worked more perfectly. In fact, the efficiency of the use of electricity of simple early devices such as electric motors was rather higher than obtains today. Over the years, as electricity became cheaper, it was possible to produce less expensive appliances and sell them competitively in part because the efficiency with which they used electricity could be lowered. But this benign long term cost trend of the electric utility sector is over, at least for the foreseeable lifetime of appliances purchased today. In some regions of the country we have experienced an abrupt increase in electricity prices since the early 1970's. Other regions may not have suffered such drastic increases yet but have the outlook of substantially increased prices in the not too distant future. Of particular interest is the Pacific Northwest which has long enjoyed cheap, federally subsidized hydropower but has run out of good dam sites and must look to far more expensive nuclear- and coal-fired capacity for future generation needs.

Another way of looking at recent price changes is to say that before the early 1970's, the nation's stock of houses and appliances were more or less at equilibrium with respect to their first costs and their running costs. But energy costs having doubled or tripled in some regions, our houses and appliances have become uneconomic with respect to their using energy at a level considerably in excess of what is presently optimal. A less polite way of saying this is that a lot of relatively long-lived consumer durables have suddenly become obsolete.

The dilemma of the regulator is now a bit more evident. If we elect to channel capital into the construction of conventional electricity supply facilities, we will have less capital available for improving the efficiency of end use of electricity at the very time when the latter strategy has suddenly become far more economically desirable. Given: (1) the abrupt departure from long term cost trends; (2) inappropriate price signals for electric power which are a holdover from past patterns of regulatory wisdom justifiable in their day; (3) inadequate consumer information regarding the nature and dimensions of the dilemma; and (4) imperfect capital markets which must be tapped in order to reduce the imbalance of investments we are presently making, it seems incumbent upon regulators to find an institutional pathway to permit us to better minimize costs.

IV. CONCLUSIONS

Improved appliance technology offers the prospect of reduced demand for electricity even without the proposals advanced above. Moreover, I am fully confident that larger users will avail themselves of superior technology that is now coming to market, so I have not stressed these developments. (e.g., annual cycle energy systems, cogeneration of electric power with processed steam production, increased efficiency of industrial electrical processes, etc.) If additional capital were channeled into improving end use efficiency as I have suggested, it would be a more productive and less expensive way of satiating demand than by constructing conventional generating facilities. These alternatives should be carefully weighed before committing massive capital to Colstrip Units 3 & 4.

MR. HADDON: Mr. Davis, Mr. Bellingham, my name is Hal Haddon of Denver, Colorado and I appear here as counsel on behalf of Dr. Ernst Habicht who is here and prepared to submit to cross-examination, and there are three corrections that I would like to note for the record in his prepared testimony. The first is at page 3, line 5, which presently reads "IES Docket No. 935." That should read I & S, and the E should be stricken. At page 8, line 24, after "Time-of-day" the word pricing should be inserted so that the sentence would start, "Time-of-day pricing should not be implemented immediately." And the last correction at page 16, line 21, after the word "instead" the following four words should be inserted: "when electricity prices rise," and so forth.

HEARINGS EXAMINER: Mr. Haddon, the word "instead" stays in and this is inserted after the word "instead"?

MR. HADDON: That is correct. It's a phrase inserted after the word "instead." With those corrections, Mr. Davis, Mr. Bellingham, I would submit Dr. Habicht to cross-examination.

EXAMINATION OF DR. ERNST R. HABICHT, JR.

Cross, by Applicants

By Mr. Bellingham:

Q Sir, how old are you?

A I am 37 years old now.

Q And I think you've given your background in your testimony here, Doctor. How long has the Environmental Defense Fund been in existence?

A It was formally incorporated in 1967, but the rudiments of the organization were alive and thriving in years previous to that.

Q Well, what do you mean by that latter statement?

A The organization was initiated through the actions of a group of scientists at the State University of New York at Stony Brook and Brookhaven National Laboratory who were concerned with the use of broad-spectrum chlorinated hydrocarbon pesticides to control mosquitos on Long Island, and they hired an attorney in order to prevent further damage to wildlife, especially raptors, the peregrine falcon and the osprey being notable amongst those, and were successful, not only on the local level, but ultimately nationally in precluding the further broadcast use of DDT and subsequent to that, aldrin, dieldrin and certain other persistent chlorinated pesticides.

Q Well, you say it was formally incorporated during the year 1967, was it?

A That is correct.

Q And you joined them in 1971?

A That is correct.

Q Do you know the extent of its activities after incorporation prior to the time that you arrived on the scene?

A I'm not fully aware, no.

Q Do you know generally?

A I know of some cases that were commenced by EDF earlier than the period when I was on board.

Q Well, when you say cases commenced, what do you mean by that?

A Well, I know the history of the organization most particularly with respect to the pesticide issues because they were really the backbone of the organization in its early years.

Q But other than that, do you know of anything prior to the time you came on the scene that they were involved in?

A Yes, I know of some of the cases that they were involved in.

Q Well, can you give us a general summary of it?

A Before I came on board, we were quite concerned with the contamination of groundwater in a couple regions of the United States, again concentrating on Long Island because the area has an indigenous aquifer. We were concerned with certain power plant construction programs in the Southwestern United States. We were concerned with the impact of the world whaling industry on whales and made several efforts, some of them successful, to put limits on whaling.

Q Any others?

A Well, I think to go down the entire litany of cases before I came on board EDF would be most time consuming.

Q Well, I'm not asking you to do that, but in a general way can you think of any others?

A Well, if you care to refresh my memory I'll certainly tell you whether or not I know anything about the case.

Q Well, now let's go to 1971 and subsequent to that time, where you are involved on a day-to-day basis with the organization, are you not?

A Yes.

Q As a staff scientist?

A As director of the EDF energy program since 1974.

Q Yes. You joined them as a staff scientist?

A That is correct.

Q And since 1974, of course, you've taken on the additional duty that you've testified to?

A Yes.

Q Well, what have been some of the projects that the organization has been involved in since you joined it in 1971?

A Are you speaking to the projects in which I have been most involved?

Q No. I'm talking general terms -- the organization?

A Well, we've divided ourselves in recent years into programs which generally describe our activities. One large program is energy. Another large program is human health, environmental carcinogens in particular are of very substantial interest to us. Another area of activity is water resources. Another area of considerable activity has been wildlife.

Q Those are the four main --

A There are several others, but they slip my mind. We have compartmentalized ourselves to a very large degree in recent years in order to permit staff people to focus their attentions more efficiently on given program areas, and to also budget more accurately for future years.

Q And you head up that portion of the staff that's connected with the energy program?

A That's right.

Q How many people are employed by the organization; do you have any idea?

A Our total employment is around 40.

Q And how are you funded?

A We're funded more than half through small membership contributions. That amounts to between 55 and 60 percent of our funding. Another 10 to 20 percent comes from large individual donations from private individuals, and the remainder comes from a series of foundation grants, no one of which is more than 8 or 10 percent of our total budget.

Q Now, insofar as your appearance here is concerned, you oppose 3 and 4, of course?

A That is correct.

Q Now, have you previously testified insofar as any other generating plants are concerned?

A I have.

Q Hearings?

A Indeed I have.

Q Approximately how many?

A One specifically relating to electric power plants.

Q What was that?

A That was the nine mile point unit number 2 before the Atomic Energy Commission since renamed the Nuclear Regulatory Commission. The hearings were in Syracuse in early 1974.

Q And you testified against the plant I assume?

A I testified against the plant at that time and my testimony here is based in part on some of the same considerations there. It's a question of timing, and not just opposition per se.

Q We'll get into that later. Have you testified as far as any other generating plants are concerned?

A Not to my recollection, no.

Q What about the organization itself? Has it come out for or against any other generating plants than the one you've testified to back in 1974 and 3 and 4?

A We've come out against selected electric power plants.

Q Approximately how many?

A I could not give you the number. We've certainly taken no broadcast widespread position for or against a particular kind of generating technology.

Q Did you say you've come out against certain selected generating plants?

A Yes.

Q And this would be over the period of time that you have been with the company, I assume?

A Since I've been with the Environmental Defense Fund, yes, and in the years previous to that. In fact, I think we've probably come out less frequently against generating installations in recent years than before 1974.

Q Do you have any idea approximately how many you've come out against in your selected process?

A No.

Q Well, you must have some general idea, 10, 20, 30?

A Well, I guess you have to define plant. I always liked to look at units, not plants, but if you define plants --

Q Well, I'm willing to accept your word, units, if you tell us what you --

A I really have no idea in terms of the total number. We've spent, as far as our total budget effort goes in recent years, relatively little in such endeavors.

Q You don't have any idea how many units that you've come out against?

A No, I have no idea.

Q Have you ever come out in favor of any generating plant?

A In a loose way we've endorsed certain gènerating schemes that have been put forth, in particular some of the technologies that combine oil or coal combustion with the burning of solid waste materials, and when you talk about generating stations I think you've really got to go all the way. We've endorsed very strongly, on a number of occasions, the increased reliance on total energy systems.

Q What do you mean by that?

A Package energy stations that provide bulk electricity and useful waste heat at the point of end use, such that the fossil fuel energy can be captured with at least twice the efficiency of a typical generating station.

Q Let's go back to my original question. Has your group ever come out in favor of any specific generating unit?

A As I told you, yes indeed we have in respect to total energy systems.

Q Well, did those involve any individual plants as such?

A Of course,they always involve individual plants.

Q All right, fine. What were some of the names of them? Do you know?

A These would be sited in commercial office buildings, industrial centers, shopping centers and what not.

Q All right. Let me ask you, then, has your company ever come out in favor, your group, Environmental Defense Fund, ever come out in favor of any specific utility generating plant?

A Well, there's another area here, too, and that's cogeneration where processed steam is presently being used by an industrial customer. We very strongly endorse the entry of utilities into collaborative generation with the industrial customer. So those are really the two areas of important endorsement for generation schemes of electricity.

Q Well, now do you remember my last question, sir? Do you remember what it was?

A Yes, I just answered it.

Q Have you ever come out in favor of any utility sponsored generating plant?

A Yes, the latter scheme is particularly germane because under the Federal Power Act only a utility can get involved in the intercustomer transfer of electricity. Private individuals can't market power to other private individuals as a general rule.

Q Well, now when you say -- you're referring now to something else you've previously testified to. Would you tell us what that was? My question was, have you ever come out in favor of any individual utility sponsored generating plant?

A Do you mean -- do you want to limit your question here, and if I can put words in your mouth for purposes of clarification -- a large central generating station which produces only electricity?

Q Right.

A To my knowledge, we've not endorsed any such venture.

Q Well now, 3 and 4, of course, is a large central generating unit that produces only -- or units I should say, contemplated --

that produces only electricity; isn't that right? That comes within the terms that you have defined just now?

A Yes.

Q And your group has never come out in favor of any such generating unit, has it?

A Well, to put things into perspective it should be understood that such generating stations usually have their own cadre of support, and utility managers, only with great infrequency, come around to environmental groups and ask them to endorse such a scheme. We've really not had the opportunity to pay close attention to all the generating plants scheduled around the United States.

Q I take it then that the answer to my question is no, you have never endorsed --

A I gave you that answer earlier.

Q Yes. All right. And the answer was no, was it not?

A Yes, it certainly was.

Q Thank you, sir. Have you ever worked for any utility company?

A No, I've been asked to consult, but I've never worked. We can't free our staff for consulting purposes.

Q But I mean prior to the time that you became involved in the Environmental Defense Fund, you never worked for any utility?

A I have never worked for an electric utility.

Q Have you ever done any actual load forecasting yourself?

A I have never participated in a load forecast endeavor as is required in the econometric sense of the word.

Q Well, when you use the term "econometric sense of the word," would you please define what you mean by the answer?

A Well, I'm referring here to the testimony of Kent Anderson, for example, from NERA, who used to be with the Rand Corporation. NERA has an econometric model which they apply to utility load growth forecasts, and Anderson has had a history of being involved in such forecasts.

Q And you have not done any of this?

A Not econometric forecasts.

Q Well, have you done any kind of load forecasting?

A I've done some forecasting in respect to the plans of the San Diego Gas and Electric, but my interests there pertained largely to air pollution and the possible conversion from gas to oil in the San Diego Air Base, and then the high likelihood that electric power generation in that region would become a more formidable component of air pollution than the automobile, which is what everybody down there is mostly worried about.

Q Now, page 3, line 25, sir -- do you have a copy of your testimony? I'd like to ask you a few questions if I might. You say the purpose of the program, and you refer there to the Environmental Defense Fund energy program which you direct, is to minimize the total social costs of energy to society. What do you mean by social costs?

A Both the internal private costs and the external costs including environmental costs.

Q Now, let's differentiate. When you say private internal costs, what do you mean there?

A The sorts of costs that are presently internalized as were described by the witness who immediately preceded me. On top of those costs there are certain uninternalized or external costs of production of electric power, some of which can be easily quantified and most of which are rather difficult to quantify.

Q Well, give us some examples, will you, of the noninternal costs?

A The long-term impact of air pollutants on respiratory disease; the impact of air pollutants on adjacent foliage; the difficulties associated with mined land reclamation, in this region uncertainty rests; intertemporal inequity, the imposition of large burdens on future generations without providing them with an adequate technology that guarantees them an assured supply of fossil fuels and so forth. These are all externalized costs.

Q And these are costs that it's most difficult to put a dollar sign on; isn't that true?

A Well, sometimes it's difficult; sometimes it's surprisingly easy to do it. But mostly it's difficult to do.

Q Well, when you talk about internal private costs, are you talking there of cost to the consumer of electricity in which an actual dollar sign is placed upon it?

A Well, let me clarify that. The costs as delineated conventionally by an electric utility include certain subsidies which are negative costs. For example, the accelerated depreciation of plant equipment, investment tax credits. These things represent taxpayer subsidies on electric power production and, of course, consumption, and to be perfectly proper about it, one ought to quantify those cost inputs and add them on to the private price as delineated in the typical application of a power company for electricity supply facilities.

Q Now, throughout here you've talked about marginal costs of supply, have you not?

A I have.

Q Could you define in clear, simple English what you mean here as to what marginal costs of supply are?

A Well, I have, as you note, excluded the total marginal costs. I have not talked about environmental costs in my testimony and it should be understood that my definition will not include those costs, but a proper, complete definition ought to. Basically, for purposes of my testimony, marginal cost implies the cost of provisioning a bit more of a commodity, here, electricity, or the savings associated with producing a bit less.

Q In other words, the cost involved in processing a bit more, as you say, electricity --

A Producing was my word and properly said it should be the delivered cost to the end user, residential, commercial and industrial customers. These would include the bus bar and transmission costs you've delineated plus the distribution costs for smaller customers plus, of course, the other un-internalized private costs that are taxpayer subsidies of electricity production, plus to be absolutely complete, the external costs of the whole procedure.

Q Well, when you say a bit more -- did you use that language, sir?

A Yes.

Q A bit more than what?

A A bit more than presently obtains.

Q Well, you mean a bit more than presently utilized, perhaps, or consumed?

A Well, let me be more complete. I assume that with respect to conventional generating facilities, for the purposes of my testimony anyway, that on the supply side the consortium of five investor-owned firms are cost minimizing. That is to say, they've tried to achieve a planing pathway that will minimize the costs of production for electric power.

Q That's to their benefit?

A I'm going to assume that that is the case. There are reasons to believe that it may not be a perfect assumption, but for purposes of my answer, let's assume that. The costs of the facility in question can be broken down into essentially capacity costs and variable costs. The variable costs are, of course, largely fuel costs, fuel being the coal mined by Montana Power's subsidiary firm. The capital costs are fixed and essentially once invested are sunk after the plants are built. The only variable costs will be the cost associated with running a plant or not running a plant, but for present purposes, looking forward, the marginal cost of supply of electricity is the total facility, fixed plus variable costs. Once the plant is built, of course, the marginal costs of supply become essentially the running costs, actually the system lamda which is the first derivative of cost with respect to output, a terminology often used by system dispatchers who are trying to economically dispatch power from units.

WITNESS: Excuse me, could I have a bit of water; is that possible?

(Pause, while witness has a drink of water.)

Q On page 5, you refer to time-of-day pricing or metering. And so that we are perfectly clear as to what that particular phrase means, would you explain?

A Well, the costs of producing power vary substantially with the time of production. They always have varied and in some countries system managers have taken account of that variance in the design of electric rates. For example, New Zealand does this even though the price of electricity there is relatively low and it's an all hydro system. The reason for this is that utility systems must be planned in accordance to meet both peak load and energy demands, and one must add new capacity largely as a function of the growth of load at or near periods of peak demand, or seasons thereof at the very least. In that respect the capacity costs of the system are properly rest far more heavily, and we have said they ought to rest entirely, on the backs of those who demand power during those peak hours in the peak season of demand.

Q Were you aware of the fact that 3 and 4 was designed as a base load plant for energy?

A I'm aware that that's what the applicants are calling the unit, yes, but in fact it's being built to meet both peak and energy requirements.

Q Well, basically, though, you don't deny that it's basic function as designed or as promulgated by the applicants is for energy?

A Well, I would imagine -- I'd like to know a great deal about the way the unit will be operated over time. It would be rational, other things being equal, for the unit to be scheduled to run during seasons where demand levels are high and scheduled for maintenance during those seasons when demand levels are low. That is a cost minimizing regimen of operating the unit and is indicative, I believe, of the fact that the unit is being planned to provide both peak and kilowatt hour energy.

Q Well, involved in any kind of a plant like this that's designed to provide energy as a part of the function of the plant, peak would also be involved; isn't that right?

A It certainly would.

Q Yes. Now, you say the costs vary as far as a plant generating electricity is concerned, depending upon the time of the day it's produced; is that right?

A That's correct.

Q Would you give us an example of that?

A With respect to the capacity available to the power pool or the individual utility, the demand level on the system varies somewhat with time of day. It varies rather more in some seasons than in others, but it clearly varies as a function of time of day. Since one puts in capacity to meet the peak-connected load, the imposition of costs ought to reflect those variations in demand and hence the variations in the need and capacity.

Q Well, this time-of-day pricing is pretty much a concept right now, is it not? It has not been generally accepted throughout the United States?

A Oh, I think in the last year acceptance of the pricing methodology is growing rather dramatically. States are implementing this now. The state of Vermont has already implemented this on a meaningful scale and many states are in the process of studying it. The Long Island Lighting Company will apply this to its largest industrial customers starting hopefully in May, according to them. That's their "hopefully," not mine, and the New York Commission, of course, has undertaken a generic proceeding which goes far beyond just the Long Island Lighting Company. And as far as the rest of the world, of course, goes it's a generally acceptable business practice to do exactly this.

Q Well, you indicate these states are studying it. In other words, at this time, it's a concept to them?

A No, I said they're implementing it. They're studying it as well.

Q Well, how many are implementing it? You mentioned Vermont, did you?

A Well, a number of states have ordered utilities to file time-of-day rates, which goes well beyond the idea of a studying concept. Some states are implementing it or have implemented it.

Q How many states?

A Vermont has implemented it; New York is in the process of implementing it for the Long Island Lighting Company.

Q For what?

A For the Long Island Lighting Company.

Q For one company?

A One company that's considerably larger than the Montana Power Company. The state of Florida has moved fairly far along --

Q What do you mean by that?

A We haven't been involved in Florida. That's one of the few states that EDF has not taken an active position in, except to provide consultation at a relatively early stage of the proceedings.

Q You said they've moved along. You mean in the concept, they're studying it?

A I guess I really can't say where Florida is. North Carolina has just ordered utilities to file time-of-day rates.

Q What do you mean? Now, North Carolina has ordered utility companies to file?

A Time-of-day rates.

Q Have those been implemented as yet?

A No.

Q Have they gone into effect yet?

A No, they have not been implemented yet.

Q So, what they're doing, they're still in the process of studying it; is that right?

A I would say ordering a company to file time-of-day rates moves well beyond the concept of studying something.

Q Well, how many companies are involved in North Carolina?

A The two big companies, of course, Carolina Power and Light and Duke Power, and then Depco has some service territory there. Those are the three that are affected by the North Carolina order. Depco, of course, has already been ordered in Virginia to do this and Pepco in the District of Columbia.

Q Any other states?

A California.

Q What have they done?

A They've ordered time-of-day rates to be filed.

Q By whom?

A Pacific Gas and Electric.

Q That has not gone into effect yet, is that right?

A That order?

Q No. They have filed -- ordered them to file the rates?

A Oh, they've already filed them.

Q Those rates have gone into effect yet?

A No, the rates have not gone into effect.

Q Okay. Any other states?

A Well, the ones we've been involved in -- Wisconsin, of course, was the landmark decision, August 8, 1974, and as a result of the order affecting the Madison Gas and Electric Company, actually all the companies there have been ordered to file time-of-day rates.

Q Now, let me ask you this. You've mentioned a few of the states that have ordered certain companies to file time-of-day rates. Let me ask you, is any company in any state actually at present using time-of-day rates in their charges to customers?

A Yes.

Q Which?

A Vermont.

Q Vermont is the only one; is that right?

A To my knowledge, yes -- no, I should take that back. There are a number of places. In fact, the National Economic Research Associates has got a little brochure out on this, but a number of places have approached this concept by providing rates for off-peak power use that reflect the far lower costs of producing power during those periods, and then there are some widespread applications of technology which really rests on concepts of marginal costs in the management of connected electrical loads. Detroit Edison has 200,000 managed hot water heaters; Buckeye in Ohio has a lot of managed hot water heaters. There are some in Pennsylvania. Some electric cooperatives are getting very aggressive in load management. Of course, the whole concept of interruptible power on a daily basis is load management prefaced on considerations of marginal costs. So the concept has been implemented rather widely, even with respect to tariff schedules filed, although time-of-day rates in the purist sense have only been applied in one or two places.

Q That's Vermont that you referred to most?

A Yes.

Q Well, to implement such a time-of-day rate structure would involve additional costs of investment, would it not, to the company?

A It depends on what customer you're talking about. It's essentially costless for a large industrial customer.

Q Well, your thesis here is that it's not a great problem for industrial customers who oftentimes today are already initiating certain cost reduction steps, such as off-peak power purchases and this sort of thing, but the tenure of your remarks here, as I take it, are directed toward the residential sector as well as the commercial sector; isn't that right?

A Well, not entirely, of course. One can meter the bigger commercial customers who are already metered in a suitable fashion by a demand recording meter, big industrial customers, of course, the same way. When one gets into smaller commercial and small residential customers, you have to ask the question, do the costs of metering outweigh the benefits or do the benefits that inflow from metering outweigh the costs.

Q And this is a problem, isn't it?

A It's not as big a problem as it's made out to be.

Q Well, what are the costs involved in initiating such a concept?

A Well, the costs are the labor and equipment associated with metering plus some rather low computer costs --

Q And it would take some time to study it and so forth to begin with, wouldn't it?

A No, the whole concept of studying it ignores the fact that the price of information is very high and it's growing. One can't effectively study by implementing sequentially downwards amongst smaller users, so that you really bear no risk at all that you're going to be exceeding the cost of metering, or that the cost of metering will exceed the benefits that flow from that, and of course in metering larger residential and the larger small commercial customers one will have a very adequate flow of information that permits one to decide whether or not it's advantageous to meter much further down in the usage levels of those classes.

Q Well, this is something that's going to have to be studied as to whether or not from a cost standpoint it would be advantageous to institute such a program insofar, for example, as your householders?

A Well, I don't think it has to be studied. I think it has to be implemented sequentially downwards.

A Now, will you explain what you mean by that?

A I gave that whole explanation in the answer to the previous question, but I'll try to rephrase it. Basically, one can obtain very useful information if one applies a metering strategy that starts with the larger residential customers and larger of the small commercial customers first and moves downward. Of course, here in the Pacific Northwest you have some residential customers that use more electric power than in most other parts of the world.

Q Well, it's possible that as far as some of your residential customers, it would cost more to institute such a policy than the benefits that might possibly be entailed from it; I think you've indicated that; is that possible?

A Oh, quite clearly, but that chance is small when you're talking about the largest customers in the residential class who offer a very good target for this pricing approach.

Q Well, are you familiar with the Montana situation?

A I am loosely familiar with the situation both in Montana and throughout the northwest.

Q Do you know the percentage of customers on the Montana Power system who are residential customers, approximately?

A The percentage of customers? The number of percent of customers?

Q Yes.

A No, I don't.

Q Do you know the percentage as far as total load is concerned?

A It's considerably less than in the remainder of the northwest, I know that. You have relatively small residential sales in Montana which I take to be a reflection of the price levels.

Q Well, do you know what the total sales of residential customers are percentagewise upon the Montana Power system?

A I've seen the figures, but they're not in my head right now.

Q Do you know the percentage of commercial customers in the Montana Power system?

A The answer to that is the same. I've seen those figures, but they're not in my head right now.

Q And then industrial I assume is the same. You've seen the figures, but you don't recall; is that right?

A That's correct.

Q Well now, let's analyze very quickly this time-of-day metering. An ordinary housewife has certain jobs to perform that she uses electricity for; isn't that right?

A Not just the housewife. I seem to be doing more and more housework myself these days, but clearly there are jobs that have to be done day in and day out.

Q And the idea of this concept is to do these jobs through electricity at different times in order to save money for the household; isn't that right?

A That's correct.

Q The amount of energy used would end up by being approximately the same, but the factor is it would be used during a different time of the day; isn't that right?

A Well, that's not quite true because at the times of peak load the line losses on the system are at a maximum, but of course the company is bringing into play its oldest, least efficient units so you're talking about a savings in energy as well as in capacity when you're talking about deferring demands from essentially a busy time of day to a time of day that is a good deal less busy. The same thing is true of the phone company, of course, who practices this policy. Telephone operators have to be supplied in great quantity during the peak periods, that represents the variable costs to the system, and in not so great quantities during the off-peak periods. Likewise, of course, telephone capacity has to be added as a result of growing demands during the weekday business hours, but not at other times.

Q Well, you indicate that you think it would save energy in the overall picture?

A Oh, sure.

Q You wouldn't have any percentage to apply on that? It's still in the speculative stage, is it not?

A Well, the Federal Energy Administration has made some estimates about savings of energy nationally and savings of capacity. I don't want to subscribe to their numbers. Clearly if the precedent established abroad is adequate for the United States, I think there's clearly going to be a savings.

Q Well, as far as the Montana Power system is concerned, you're not in a position to indicate what the possible savings might be?

A Well, we've got to look at the whole power pool here. You've got four other companies with you, some of whom run combustion turbines, both jet engines and industrial turbines, and the less they have to run those things to meet their peak load, the more oil there's going to be saved.

Q Well, to go back here, you haven't made any analysis of the

Montana Power system to determine whether or not time-of-day rates would decrease energy consumption by any percentage?

A Well, I don't think you want to look at it from the point of view of the Montana Power. You've got four other applicants in here with you that want to build two 700 megawatt stations, and I think quite clearly Montana Power couldn't build two 700 megawatt stations. So you want to look at the running costs of -- if saving energy has a good thing, it's on a national level, not just in Montana, so you want to look at the running costs of firms involved in the pool or consortium that's building the plants.

Q But I'm asking you --

MR. GRAYBILL: Mr. Hearings Examiner, I realize I have no right to cross-examine, but I am listening to the testimony and I'd like to ask you to ask the counsel not to interrupt the witness.

HEARINGS EXAMINER: Well, he's aware of that, and I'm sure --

MR. GRAYBILL: I just want Mr. Bellingham to be careful about that because he makes it hard for me to understand the witness when he interrupts.

MR. BELLINGHAM: Have any of my interruptions bothered your answers? I'm sorry if I did.

MR. GRAYBILL: No, it's me that it's bothered, Mr. Bellingham, not the witness.

MR. BELLINGHAM: No, I'm asking the witness whether or not there's been any problem.

WITNESS: Well, it's hard to talk over somebody else's voice, but I'll try to let you know; maybe I'll raise my hand.

MR. BELLINGHAM: What I'm wondering is did I cut you off from saying anything here along the line?

WITNESS: Well, I usually manage to talk over you. I just hope the tape recorder got it, but maybe I'll just raise my hand when --

MR. BELLINGHAM: I notice that it doesn't seem to slow down the flow of words at all, so I assume there's been no problem, Dr. Habicht.

Q Well, let's go back here before Mr. Graybill's remarks, and as far as the Montana Power system is concerned, you personally have not conducted any survey of it or any of the other applicants in this case, have you, as far as time-of-day metering, what impact it might have specifically directed to these companies?

A Well, one has to understand that to talk about imposing marginal costs on the one hand is only a portion of my testimony. The flip side of that is to look at the societal savings associated with marginal costs not borne by the firm or by the rate payers. The problem is that the utility charges for electric power on the basis of average cost, which is very substantially less than marginal costs, particularly in Oregon and Washington, and is essentially subsidizing, in the strict economic sense of the word, load growth that is not economic with respect to alternatives, the alternatives being the institution of improvements in the efficiency of electricity and use that could be accomplished should the construction program delineated in the application not be undertaken. And that's the important question for society, how much money do we have to play with to effect these energy use and improvements.

Q Do you remember my question, sir?

A Which question?

Q The last one I put to you?

A Well, would you like to rephrase it then?

Q Do you remember it?

HEARINGS EXAMINER: Why don't you repeat the question and save some time in sparring.

Q I asked you whether or not you've made any study of Montana Power or the other applicants in this case as to what effect time-of-day metering or rate structure might have?

A I've made no specific study of this region. The studies that I depend on are national studies, and they lead one to rather quickly believe that the impact will be greatest where the discrepancy between present average price and marginal price is the greatest.

Q You answer, then, I take it, would be no; is that right?

A I think the answer would be no, I haven't, and I don't think that it's really essential to do so because of the grave discrepancy between historical and marginal price.

Q Now, on page 6 you talk about seasonal differentials and price differentials and some others; you're talking here about summer and winter rates; is that correct?

A Summer, winter, spring, fall, monthly variations really. One can vary the rates by month so that some months would impose no capacity costs whatsoever on customers and other months might impose quite a bit.

Q Well, you're acquainted with the fact, I assume, that in the Pacific Northwest generally, and particularly in Montana, the greatest demand upon a system is in the winter; you're aware of that?

A You're still winter peaking?

Q Yes.

A Yes.

Q And say that we have price differentials as between seasons involved; what would happen to a person who uses a minimum amount of electricity in the summer, but for one reason or another uses electrical heating in the winter?

A What would happen to that person?

Q Yes, their costs, of course, would go up, as far as electricity?

A That is correct. And, of course, the reverse is true. Those who use electricity in the summer, but not in the winter, would see their costs go down. And it should be pointed out in that context that the person who actually used electric heat in the winter, but relatively little electricity in the summer might be employed by a firm that used a great deal more electricity in the summer than in the winter, and the security of his employment or his wage rate might go up as a result.

Q All right. At page 7 you talk about "the proposition is that the price charged for an additional kilowatt-hour of electricity ought to reflect the additional costs to the utility of producing it." What do you mean by that?

A And distributing it, I might add.

Q Fine. What do you mean by that?

A Both the capital costs and the variable costs, fuel costs, should be expressed as clearly as possible in the tariff design of the regulated firm so that the customer experiences the same cost exposure that the utility experiences. If there is a difference in the cost exposure, then the customer is either being subsidized by other customers or is, in turn, subsidizing others.

Q Say that a utility company has had some units on line for some time at a greatly reduced price compared to the then present price. People that had purchased electricity from this company over a period of time, I would take it, should have reflected on their rates the costs of the production of these particular generating units reflected on their rates; is that right?

A No, that's not it at all. One can't dedicate a generating unit to a customer or a set of customers and still retain the public utility concept or minimize costs for that matter. The problem is, as you hinted, that marginal costs of production are now very substantially in excess of average costs of production. This is especially so in the Pacific Northwest which is going to see probably a consumer revolution in the next decade or two unless rates are turned around. Now, the way you get around this dilemma, which is imposed by the way because utilities are allowed a rate of return on equity-- they're presented with an opportunity to earn up to a rate of return, but not more than that amount, and if one collects revenues at marginal costs, one obviously would be collecting an enormous surplus of revenues. Now, the economists tell us that the efficient thing to do is actually to collect those revenues as taxes, and tax away the surplus. But the public utility concept requires the returning of that surplus out to the customers. One good way to return it is in such a way as to least influence the patterns of demand, which says that you ought to return it to those customers who are least elastic. This is a point of considerable interest in these generic rate proceedings that are underway around the United States today, namely the consumer surplus problem.

Q Well then, you would not differentiate between, for example, residential customers insofar as the time that they came on a particular system of a utility --

A Well, first of all you've got to carve out the costs between classes of customers, and I think the best cost allocation method under these circumstances would be the peak allocation of capacity costs between customers. And then from there, within each customer class, redistribute these revenues in such a way as to have the surplus fall in the least elastic blocks of consumption. Obviously one has to make compromises. Furthermore, one has to pay close attention to the need to see that no customer or customer class is traumatically injured economically in a matter of a few months or a year within the rate change. But we're talking about the way or direction which tariff designs should properly flow.

Q Well, to go back to my question again, you wouldn't differentiate between residential customers, for example, and that particular class insofar as the time they came on the system is concerned? That was my original question.

A Once I carved out the costs on the peak allocation method, no, insofar as I could economically meter smaller customers, clearly not. Now, I should point out that it is, as a general rule, less expensive to serve large customers than small customers, and that the distribution costs of the system will clearly be borne by the smaller customers and not by the large industrial customers who incur no distribution expenses. Also larger customers are a little cheaper to serve because the line losses associated with serving them are somewhat lower. So we're talking about a level of rates in each class that is going to be somewhat different as a result of the responsibility of a particular class for different costs.

Q All right. At the bottom of page 8 and the top of page 9, you indicate, "Time-of-day pricing should not be implemented immediately by the applicants for all of their customers, because there are metering costs associated with time of day pricing which must be weighed against the expected benefits." You previously testified that there are problems here that the costs associated with instituting a time-of-day pricing might be more than the expected benefits that might possibly flow from that?

A Yes, for a small customer, but I've gone on to say how to minimize the risks of overshooting the mark.

Q And at page 10, you say, line 6, "It should be remembered that even assuming the experiment is well designed it may not yield much more than we already know or of which we are reasonably certain." What do you mean by that?

A Well, in this section of the testimony I've been trying to emphasize that the whole concept of experimenting with these tariff designs is really rather foolish. We know that there have to be some benefits that exceed costs and if we pursue a suitable implementation strategy we are going to be able to move as essentially at least closely to a better priced electric utility sector, and more efficient use of electricity in the American economy.

Q You do go on and say, however, that some of the effects of marginal cost pricing will not be evident for several years, depending on certain things, and these effects will not be revealed by a shorter-term experiment. Now, when we talk about short term, what are we talking about in number of years here? Up to 10 years, for example?

A Oh, no, 1 or 2 years. Way less than the lead time for the construction of a new electric plant.

Q "will not be evident for several years." Then, your terminology of several years is 1 or 2 years; is that right?

A Yes, 1 to 3 years. Although in some instances you're going to see some dramatic changes. It depends on the nature of the end use. If you're talking about electric heat, for example, and you're worried about the large residential consumer with an electric home, and certain steps are made to arrange for financing capital, you're going to be able to see a rather swift pay-back on this. You can see it in one heating season, if the utility pursues an aggressive program to minimize costs for its customers. The installation of insulation can occur rather quickly; it's labor intensive; it puts people to work in the region where the end use occurs, and clearly is warranted on a cost savings basis.

Q Well, isn't it true that the baby boom after World War II, these children are in their early twenties now and setting up households today, are they not?

A Well, not as rapidly as people thought they'd set up households. They're not having children anywhere near as rapidly, I know that.

Q Well, but they're having children and adding to the population?

A Well, the demographers made some fairly wild predictions as far as population growth rates in these years that we're presently in with respect to the number of women attaining childbearing years in the early seventies, and the demographers have been proven wrong. It could be said that there's an enormous potential out there for increased birthrates, but we just haven't seen it and it's got a lot of people puzzled.

Q You talk here about customers buying new electrical devices; hopefully they can be educated to buy more efficient devices?

A Well, I don't know if education is the right word, although that's part of it. The consumer information is really dreadful for small purchases. Not knowing what the running costs of a device are, of course, is a big barrier. That is to say consumers are presented with completely inadequate information to permit them to make intelligent decisions. On top of that no agency or institution exists throughout the nation that is trying to correct this terrible imbalance. Now we are talking about labeling efficiency standards on applicances on a mandatory fashion, but that doesn't come anywhere near solving this problem of misinvestment in high running cost, low first cost applicances that people make.

Q Well, as far as replacement of existing high energy consuming appliances, you are hopeful that this might be accomplished in the future by householders?

A There's some dilemmas there, too, a lot of them. When energy prices begin to go up, another way to look at the situation of the small consumer is that he's living in a house and burdened with appliances that suddenly have become obsolete. One way to look at the energy crisis that we've gone through, that is to say the price increases that we've gone through on energy, is that it's rendered obsolescent every 1 of 75 million buildings in the United States and very nearly all of the appliances in those buildings, so many of these applicances could properly be written off before they wear out or break down and ought to be junked today and replaced immediately with things that are more efficient.

Q Well, let's analyze an average residence, for example. A woman has vacuum cleaners and mixers and so forth; some of them are without any question inefficient devices, aren't they?

A Well, the big ticket items are really electric heat, electric water heating, refrigeration, cooking; those are high saturation appliances in part of the region although, of course, in Montana you don't have anywhere near as much electric heat as you have in Oregon or Washington.

Q Well, it's going to be rather difficult to convince a person that they should turn in their old, inefficient device and purchase a new one, isn't it?

A Well, it's been conservatively estimated that if you just take a couple of inches of insulation and wrap it around your electric water heater, you save 350 kilowatt hours a year.

Q How many people have done that? Do you have any idea?

A Oh, I don't think anybody out in the public really knows about it. The trouble is that the main institution to get this information to the public is generally the electric utility, and with few exceptions the utility has not taken a very aggressive posture with respect to permitting its customers to minimize costs.

Q With today's high prices, don't you think this statement is true? It's rather difficult to get a woman to replace an existing inefficient electrical device with a new one that might be more efficient. Wouldn't you say it's going to be hard to get that concept over to them?

A Well, with today's -- let me put in a counter -- with today's financial institutions and the attitudes and actions of utilities, this is clearly the case. We don't have a way to permit capital to flow in adequate amounts to making these costs the highest pay back investments in the electric utility sector, and what we need to do, of course, is set up mechanisms to permit people to acquire higher first cost, lower running cost devices and look at it as a savings in both capacity and energy, money that need not be spent by the electric utility becomes available for the purposes of making these improvements in the efficiency with which electricity is used. And that suggests to me that the electric utility is a good vehicle here. It can do a number of things if it seeks to be aggressive on it. First of all, it could seek to have long lived applicances such as stay with the house for the life of the house. Go into the rate base. That may be the only way we finance some of these improvements like heat pumps instead of resistance heating, and look at the incremental investments of the heat pump as an investment in electricity capacity and energy, kilowatt hours. On the other hand, shorter lived appliances might have to be financed in a manner analogous to the way we finance the insulation of housing in Michigan and in Colorado. The utility becomes a financial tunnel between low-cost capital and the consumer. The reason for that is the utility is in an excellent position to judge the credit risk of its customers. Nobody else has that pool of information, so the utility can minimize credit risk and get money at a low cost in the marketplace because it's such an effective competitor for capital; it can go all over the world to raise money and be permitted to earn a profit on this activity; it ought to be.

Q Well, is this being done anywhere at present?

A Well, in this country the latter strategy is not being pursued except for insultation and there principally by gas utilities who are looking for increments for gas. The gas market doesn't clear right now, and it's the one way they can get new gas is to go insulate houses. Forty percent of the housing stock of the United States is not even insulated, which tells you that there's a lot of slack in the system. And of course this gas permits Colorado Public Service Company, for example, to get new hookups on gas service.

Q As far as electrical appliances are concerned, for example, you mentioned insulation, but as far as electrical appliances are concerned, there is no rate structure based upon the efficiency of the appliance involved, is there?

A I don't know of anyplace where the investor-owned utility is involved in quite this sort of thing. Now, there are some analogous places, certainly the load managed hot water heater goes into the -- the heater itself doesn't go into the rate base, but the equipment goes into the rate base, and that's at least a half a step in the right direction, but utilities have to look at what the costs to their customers are and after all they're not selling kilowatts and kilowatt hours; they're selling a level of consumer satisfaction. You don't eat electricity and you don't wrap yourself in electricity at night to keep warm; you're achieving some level of consumer satisfaction with this and utilities ought to attempt to maximize that with a minimum of cost.

Q Well, as far as individuals are concerned, replacement of less efficient electrical devices with more efficient electrical devices, unless there's some incentive for them to do that, they're not very apt to do that, are they?

A Well, as I said first of all, electricity is pretty badly mispriced. Secondly the financial institutions, to accomplish this task, are lacking. The electric utility is in part responsible for both of those, thought pricing and market failures, and it seems to me rather obvious that if we're going to climb out of the dilemma we're in around the country, and if the utilities are going to minimize consumer rage, we're going to have to find a better way.

Q Well, as things stand right now, it's rather difficult to persuade a householder to do this, isn't it?

A Well, the householder has no incentive to do this --

Q Right. So I say it's rather difficult right now --

A -- in some areas of the country. Or in other areas of the country, the householder is an enraged consumer that would like to do in his local electric utility manager because he's seen the price of electricity double in the last couple of years. Now, here in this region of the country, it hasn't gone up anywhere near as fast, but we know it's going to go up in the next decade. In other words, this region of the country ought to profit from the experience in the Eastern United States and on the Pacific Coast and understand that consumer relations are going to deteriorate terribly unless utilities take a strong position to minimize customer costs. You are at a great advantage over your compatriots in New York and in California, tremendous advantage. You know this is going to happen here, and you know what the outrage is, and you know that you've time to do something about it.

Q Well, as matters now stand, it's rather difficult, isn't it, to persuade the householder to replace --

A Well, it's not a question of persuading the householder, it's a question of going in and filing a proceeding before a public utility commission and persuading the regulators; that's what it's all about; that's where the action is.

Q And that's up to the regulatory agency, isn't it?

A It's up to the utility.

Q Well, the regulating agency is going to have to make a final decision on it eventually in order to implement these plans that you've indicated?

A Sure, but the arguments are sufficiently clear-cut that I think you'd have little trouble persuading any regulatory agency in the United States --

Q Well, that's your opinion, isn't it?

A My experience.

Q Well, it's your opinion also, isn't it?

A Well, with respect to the pricing arguments it is my practical experience.

Q Now, you indicate on page 20 that, "Of particular interest is the Pacific Northwest which has long enjoyed cheap, federally subsidized hydropower but has run out of good dam sites and must look to far more expensive nuclear and coal-fired capacity for future generation needs." Do you recall that statement?

A I have it before me.

Q What is your authority for the fact that we have run out of good dam sites in the Pacific Northwest?

A Well, the context of that is that the premium hydropower sites in this region of the country -- I didn't want you to miss my answer. Are you ready?

Q Go ahead.

A The context of that is that the saturation of hydrogeneration in this region has occurred over the most favorable dam sites throughout the region. The biggest, best sites have been used up by and large. There are a few left, but not many. Even putting in one more wouldn't buy you a whole lot of time compared to the alternatives I've laid out. The problem here is, of course, also that in the past years the dams were built with federal funds at very low interest rates at far lower construction costs. So even if you go in and build a new hydro site today, you're talking about an embedded cost of capital, a cost of capital that is a good deal higher, and a cost of capacity that is a great deal higher as a result of escalation over the years in the price of just building plain hydro dams.

Q So it's your opinion that as far as the future is concerned, we are going to have to look to more expensive nuclear and coal-fired capacity in the Pacific Northwest particularly?

A Insofar as the supply side goes, although I think as you do this the attractiveness of investment on the demand side becomes all the greater.

Q Do you know in Montana who sets the rates for the utility companies?

A Yes. The utility commission is the regulatory body that sets the rates for Montana Power Company.

Q Do you know the name of the commission?

A The public utility commission?

Q Do you know the name of it?

A Public Service Commission of Montana.

Q And it is the one that sets the rates; you're aware of that?

A Oh, yes.

Q It is not the Board of Health before whom this hearing is --

A They don't set the electricity tariff design, no.

Q Or the Board of Natural Resources?

A No.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Mr. Haddon.

Redirect, by Environmental Defense Fund, Inc.

By Mr. Haddon:

Q Dr. Habicht, is it your understanding that the Board of Natural Resources can at least consider the effects on demand that utility rates instituted or at least proposed by the applicants might have?

A I think it would be very dangerous not to do that. I think that they would be ignoring one of the most formidable determinants of the need for the project, both on the part of the Montana Power Company and its fellow applicants.

Q Dr. Habicht, let me go back to a couple of questions that Mr. Bellingham asked you when he started your cross-examination. He was inquiring about whether or not the Environmental Defense Fund had ever actually been a proponent of a generation facility or plant. Is there some basis on which you determine whether or not to oppose or simply take no stand on a generation plant?

A Well, in respect to the overall effort of our energy activities we spend relatively little time on site-related facilities. We've spent an overwhelming amount of time on pricing arguments in such matters. Where we have become involved in site-related objections, we have done so on the basis of there being clearly superior alternatives, or clear questions of need for the proposed power plant, or in one instance where we were involved in the modification of a facility rather than the alteration of a facility, it was because the proposed operation mode of the power plant would have done so much harm to a fishery that we felt we could not keep silent on the matter.

Q Are there instances, in particularly Colorado, where you have actually simply made suggestions as to building a generation facility and not opposed them?

A Yes, before the Colorado Public Utilities Commission.

Q What instance was that and what were your suggestions?

A Well, we recently filed an amicus brief in a site-related application where we suggested it would be advantageous to execute a number of measures that I have talked about here today before proceeding too far down the construction program of the principle utility in this state, the Colorado Public Service Company.

Q But you didn't actually oppose the particular plant they were seeking a certificate of convenience for at that time; is that right?

A No.

Q Your remarks were rather addressed to future proposed construction of other plants other than that particular one?

A That is correct.

Q Dr. Habicht, Mr. Bellingham also asked you about the experience of various states in percentage decreases in demand. Are there also some very firm figures available from other countries that indicate what time-of-day or marginal cost pricing can do to demand?

A Well, it's been implemented partially in France for over a decade and the capital savings are equal to at least 7 percent of the investment. The French have made a number of conservative assumptions about their savings, so this is really the bottom end of a range, and the French, of course, use a great deal less electric power per capita than we here in the United

States. Their per capita demands are about a third of the U.S. and, of course, a good deal less than a third of the demands in the Pacific Northwest. So transposing that cost experience to the United States, you're talking about a 2 billion dollar annual saving for the U.S. economy in capital alone and another several billion in fuel charges really for the plants. It would be a bit more for the Pacific Northwest at a minimum. Now the FEA has made a much larger estimate of both capacity and fuel savings. One of the things is that in this country we burn an awful lot of oil or oil products or oil substitutes like gas to provide peak power in combustion turbines, and there are directly available to the U.S. economy meaningful savings of oil as a result of discouraging consumption during peak periods of demand, and, therefore, running gas turbines a lower number of hours per year.

Q Do you know what the FEA figures are, the FEA estimates?

A Not offhand and I don't have them with me. I'd be glad to supply them for the record, though. They were presented in the FEA's brief in case number 28606 before the New York Public Service Commission on the generic motion for rate reform in that state.

Q Do they indicate that those savings can be significant in this country?

A Oh, indeed they do.

Q Are they proponents of the concepts that you're advocating, marginal cost pricing?

A Strong proponents.

Q Mr. Bellingham asked you also whether or not you had done any study of the Pacific Northwest with regard to the advantages or disadvantages of marginal cost pricing, and you indicated that you had not, but your reading of national studies was provative. Can you explain that answer?

MR. BELLINGHAM: Now, just a moment. I object to the question on the grounds that it incorrectly states my question. I did not relate my question to the Pacific Northwest. I instead related it to Montana Power specifically and the other four applicants in this case.

HEARINGS EXAMINER: Well, you can rephrase it to cover that, can't you, Mr. Haddon?

Q Confining your attention now to the Montana Power Company and the other four applicants in this case, do national studies lead you to any conclusions -- national studies that you have reviewed lead you to any conclusions about the advisability of instituting marginal cost pricing concepts with respect to the five applicants?

A Yes, as I implied earlier, the discrepancy between average cost and marginal cost is the greatest in this region of the country. There are a couple of reasons for that. One is that fuel costs in this region are rather low. First of all the region is heavily dependent on the bulk hydropower supply, either privately owned or operated by the Bonneville Power Administration which has really trivial running costs associated with it. And secondly the alternative fuels that are being relied on in this region are, comparatively speaking, inexpensive with respect to fuels used elsewhere in the U.S. economy for electric generation. So the bulk of the costs that we're talking about, both marginal costs and average costs, are generation, transmission and distribution, fixed costs, while in the East Coast, for example, and in California we're burning expensive fuels, the costs of which are passed along directly to the customers in the form of the Fuel Adjustment Clause, so that that in and of itself reduces the discrepancy between average cost and marginal cost quite a bit.

Q Are you saying that marginal costs in the Pacific Northwest are going to be in the future higher than their counterparts in the Eastern part of the United States?

A No, I don't think that's true. I think that the difference between marginal cost and average cost is very substantially greater in this region, of course most particularly for some of the public power districts, but also for some industrial customers who have been getting so-called surplus power over the years, and many of the IOU's were getting some rather low-cost hydro power sold as surplus to them, which tends to artificially depress the rate levels beyond a marginal cost.

Q Does that make it easier and relatively cheaper to institute marginal cost pricing with respect to those customers at least in this region?

A No, I don't think it's any more easy or any less easy in this region. Given the very high level of residential use in some of the service territories under question, it may be possible to effect savings by metering a larger number of residential customers than would otherwise obtain, but that's not really very important. It's the big industrial customers that you want to worry about as much as anybody. Some of the aluminum production is still extraordinarily subsidized by the past actions of the U.S. taxpayer and by the reality that the opportunity costs for increments of power to industrial customers are in many cases 6 to 8 times as great as the price presently being paid by those customers, which is another way of saying that it's not surprising we're up to our armpits in aluminum cans all over the highways of the United States.

Q Do you, in your opinion, foresee an effect on demand in the applicants' territories by instituting marginal cost pricing concepts now, here?

A Sure.

Q What kind of effects?

A I think you'd see a reduced load growth over time and increased dependence on the alternatives to electricity consumption that I delineated. Whether or not there would be interfuel shifting seems to be a matter of some interest in this proceeding. I suspect that one alternative that's not been well laid out might be relied on rather more heavily in the future, and that's large end users for natural gas, going to low or intermediate heat content gasification for processed fuels. That seems to be the least cost strategy presently available. In fact, that technology is commercially viable right now and devices to do that are on the shelf. Why it hasn't been mentioned thus far in any detail in the materials I've read, I don't know, but perhaps it's already on the record. But basically that depends on getting ahold of the gas design, too, which is in terrible imbalance all over the United States, and turning that around, to give customers a better view of the reality that gas prices are going up, and they're not going down anymore. When prices are going up, it's fairly perverse to sell power on a declining block rate basis.

Q Is that being done in the applicants' territories now?

A Oh, sure. It gives the consumer a completely erroneous signal. It tells him that the price of power next year is going to be less than it is this year. It gives him the inference that the prices, in fact, are going down all the time. It used to be justified because that was true, but it's certainly no longer true.

Q What would you do with those rate structures?

A I'd flatten them and start imposing the capacity costs for electricity in the appropriate time periods. For gas, I'd probably not only flatten them, but invert them a little bit, particularly for large elastic users so as to permit them to achieve at least societal cost alternatives to gas; encourage them to get off the gas pipelines.

Q With respect to electricity rates, is it your opinion that flattening those blocks would have the effect of reducing demand?

A Surely.

Q Dr. Habicht, Mr. Bellingham also asked you about your testimony relative to more efficient appliances, and getting the information to the housewife and the consumer. Is it your opinion that there are more things utilities can and should be doing to get that information to the consumers, and if so, what should they be doing?

A Well, I guess I implied something like a full service utility concept where the electric utility takes cognizance of the fact that its customers use electricity for a number of things and that with respect to the price of providing them more electricity they're using it less and less efficiently, and that there are enormous improvements to be had. For new customers the improvements are really, really formidable. You're talking about the chance of using a heat pump against electric resistance heating. If the heat pump is properly implaced with some storage capacity and properly maintained, it can achieve a coefficiency of performance of greater than 3. Offering electric heat is the most efficient way to heat a house, which it certainly isn't now with resistance heating. But to do that properly we've got to find new financial mechanisms, new financial vehicles, which the utility could get into rather quickly.

Q Are there presently utilities doing that in this country?

A Well, I think there's more chance in those service territories where the utilities are under such fantastic pressure from consumer groups. It's hard to imagine here in the Pacific Northwest of the degree of outrage that attains in the East Coast, but it would be advisable to understand it better because that's going to happen in the next decade or two if growth rates for electric power continue to proliferate and the prices for electric power go up as they must in respect to the difference in cost between new capacity and old.

Q Are there actual dollar savings as well as savings in the amount of electricity used that consumers can achieve by using more efficient appliances?

A Sure, that's the name of the game. You get people by their wallet, their hearts and minds are going to follow. It doesn't make any sense to advocate or institute a savings of electricity where the costs to the consumer or to society at large are greater than the savings purported by one of the parties.

Q Are there any appliances on the market right now this minute that illustrate that point?

A Sure, the refrigerator is a good one; the heat pump is another one for new applications. The better versus the worse insulated hot water heater is a fine example. With a few bucks worth of insulation you can cut 350 kilowatt hours a year off an electric hot water heater; that's a pretty good investment. That must have a pay back of about 6 or 8 months associated with it if the customer does the labor, and if somebody from outside comes in and does the labor it probably has a pay back of no more than 3 or 4 years, which is pretty attractive to a residential customer.

Q Is it your view that broad-gauged dissemination of these economic facts by the applicants and others can have the effect of dampening demand?

A Sure. Not to do it seems to me to be financially insane, pardon my choice of words, financially irresponsible at the very least. We know where these savings are to be had. We know what kind of consumer outrage we'll obtain if we don't start moving in the right direction. We know what institutional vehicles are indicated. We know where the rate design really ought to properly go and not to do it seems to me to be able to say that I'm not willing to help solve the nation's energy dilemma.

Q Are there other institutional arrangements that can affect demand, have a dampening effect on it?

A Well, the nation's tax policies clearly, but matters not only of federal tax and energy pricing policy, matters of subsidy that flow to the electric corporations -- these are of considerable impact -- but also local building codes, some state regulations and laws and so forth; these all have an impact. I said earlier that all these buildings and most of the applicances in them suddenly became obsolete when prices began to go up, but it should be properly understood that underneath that, buried from view if you will, is a whole array of legislation and regulation standards that have become obsolete to the point of real perversity.

Q Dr. Habicht, are there other measures in this region that I haven't asked you on redirect that can be taken to reduce demand, particularly residential demand?

A Well, the insulation of homes is one of the best strategies to execute both gas heated and electric heated homes, oil heated, too, of course. It's estimated by the Federal Energy Administration that on a nationwide basis, the application of $300.00 worth of insulation to oil heated homes, and this is across the whole country, $300.00 per housing unit of insulation will produce oil in the form of savings at an effective price of $4.39. That's a real bargain. Oil generally costs around $16.00 to $18.00 delivered to the home, and if that's the case it should be understood that the gas savings are probably a bit more since gas heated homes generally tend to be less well insulated than oil heated homes. Of course, electric homes are generally better insulated, but still they are not insulated anywhere near to the optimum extent. It's been decided, in New York State anyway, that all electric homes, if provided with increased insulation, could reduce electricity consumption by a meaningful extent; between 20 and 25 percent of the electricity consumed by the house could be eliminated by putting in an optimal amount of insulation.

Q Dr. Habicht, are there other matters or questions posed to you by Mr. Bellingham on cross-examination that you want to elaborate on in your testimony?

A No.

MR. HADDON: I have nothing further on redirect.

HEARINGS EXAMINER: Mr. Bellingham, re-re-cross?

Re-cross, by Applicants

By Mr. Bellingham:

Q I have just a couple of questions that perhaps I should have asked you before. You graduated in 1960 with an AB in chemistry?

A From Harvard College.

Q Yes. And then you received later a PhD in chemistry from Stanford in 1967?

A That's correct.

Q What did you do during that interim period?

A I was working on my doctorate at Stanford University.

Q I see. Between 1960 and 1967?

A That's correct.

Q And after you received your doctorate in 1967, and prior to the time that you joined the Environmental Defense Fund in 1971, what did you do?

A I went first to the University of California at San Diego as a postdoctoral fellow for two years, and then was appointed to the faculty as an assistant professor of biology and lecturer in chemistry. I taught thermodynamics and a number of other courses principally to biology majors, also chemistry majors, and mid-'71, of course, I left the University of California and joined the staff of EDF.

Q Now, you've expressed many opinions during your testimony here today, and these opinions are based upon the experience that you've gained since you joined EDF as a staff scientist in 1971; isn't that right?

A Well, not entirely. I was interested in electric utility matters in San Diego starting about 1969.

Q But basically the knowledge that you've gained is since 1971 when you joined EDF; isn't that right?

A Oh, I'd say the bulk of the knowledge, certainly, since I worked full time on the matter since '71.

Q Have you ever worked for anybody other than Environmental Defense Fund?

A I've worked for the University of California --

Q Yes.

A -- at San Diego.

Q Other than a university, have you?

A Well, part-time employment during the summers, oh, yes.

Q During college years, the usual part-time employment?

A Sure.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Mr. Haddon?

MR. HADDON: I have nothing else.

HEARINGS EXAMINER: Very well, sir, you're excused. Do you have anything further, Mr. Haddon, on behalf of the Environmental Defense Fund as a registered party to this action?

MR. HADDON: I do not, and I would indicate to you, Mr. Davis, and to all the other parties, that our only other endorsed witness, Dr. Dwayne Chapman, could not be here because he has a 5 month project going with the New York Public Utilities Commission, so we have no other testimony to present.

HEARINGS EXAMINER: And you rest your case-in-chief then?

MR. HADDON: That is correct.

MR. BELLINGHAM: Sir, I'm not sure whether I objected to his testimony after he took the oath.

HEARINGS EXAMINER: Very well, you can put your objection in the record at this time because you did have a continuing objection to any statements served, so the record will show that you have your usual continuing objection; is that correct?

MR. BELLINGHAM: Yes, sir, on the grounds that the statement was not served upon us for the reasons previously given on January 10, 1976.

HEARINGS EXAMINER: Very well, the record will so show and the objection, of course, is overruled.

MR. BELLINGHAM: And I would like further to state for the record that it was served, this particular statement, by Dr. Habicht on March 9, 1976, and accordingly we move to strike, for the reasons previously given, the entire testimony of Dr. Habicht.

HEARINGS EXAMINER: Very well, motion is denied. You're excused, sir.

(WITNESS EXCUSED)

MR. GRAYBILL: Mr. Hearings Examiner, Mr. Gilfeather is here from the Public Service Commission; I just want you to realize that.

P. J. GILFEATHER, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF MR. P. J. GILFEATHER WAS DIRECTED TO BE INSERTED AT THIS POINT.)

My name is P. J. Gilfeather and I am one of the five Montana Public Service Commissioners. I appear here today on behalf of the Commission to reiterate and supplement the Commissions stand heretofore taken on Colstrip 3 and 4. We feel that in view of the environmental uncertainties presently existing that it would be untimely to approve 3 and 4 at this time, particularly when we have No. 1 on line now and it can be studied singularly and will have No 2 on line soon and then we will be able to study the cumulative effect of having two such plants together and thus get some actual insight into the effect of multiple plants in close proximity on the environment.

Further we understand there are extensive up-dating studies in progress, and nearing completion, on the effect of high tension lines which could bear on the feasibility of the proposed construction.

Thus in all we feel the proposed construction is premature in light of the possibilities,within the near future,of gathering more complete and authentic information on these environmental issues.

Further we feel that the Natural Resource Board and the public must be reminded that the addition of these proposed facilities most certainly would bring requests by the utilities for increased rates to cover return on capital investment.

The extent of an increase, if any, would depend on many factors, some of which would be how much of the utilities share in these plants would be used and useful to Montana rate payers and thus be eligible for inclusion in the Montana rate base. Another question or factor would be, how should the rates be structured so that there could be a determination of fair and just rates in and between the various classifications of
that who
service, particularly so as to require/those/necessitated the additional

facilities pay their full and just share of such expansion through rates designed on a full cast per unit basis.

Also these plants are being built by a consortium of, L believe 4 companies, operating within and between 5 or more states, thus the Commission will be confronted with not only allocating plant and expenses between different classes of customers within the State of Montana, but also with the problem of allocating between interstate and intrastate transactions and will also have to keep track to some degree of the operations between the partners.

All this will necessitate a program of securing and maintaining very extensive and costly "cost of service studies" and a great deal of auditing, thus the commission, the people and the utilities could look forward to long and laborious rate hearings in order to come up with fair and reasonable rates.

Thus, even if by chance rates in themselves were not increased, the cost of operating the Public Service Commission, if proper rate hearings were conducted, would certainly increase tremendously. Therefore, the rate payers or the tax payers or both would have to foot an increase in out put of cash.

We sincerely request that the Board of Natural Resources give due consideration and deliberation to these important questions before acting in this matter.

HEARINGS EXAMINER: Mr. Peterson, you may cross-examine.

MR. PETERSON: Thank you, Mr. Davis.

EXAMINATION OF P. J. GILFEATHER

Cross, by Applicants

By Mr. Peterson:

Q Mr. Gilfeather, has the Montana Public Service Commission made an independent study as to the environmental effects of the operation of Colstrip units 1, 2, 3 or 4?

A They had a study made by some professors from the university and that's filed in the records here.

Q Was that an environmental assessment, or was that an assessment relative to rates?

A It was an assessment in regard to environment as I understand it.

Q Do you know who did that?

A No, I'm not sure. There were two professors.

Q What is the legal duty of the Montana Power Company relative to its customers?

A What is the legal duty of the Montana Power Company?

Q Relative to its customers?

A To assessments?

Q Relative to its customers. What is the legal duty of the Montana Power Company to its customers?

A Well, my interpretation, and I think the general interpretation that we have, is that the Montana Power is supposed to furnish services to its customers such as needed at the most reasonable rates possible.

Q The Montana Public Service Commission has not undertaken a study relative to the need of the energy to be generated by Colstrip units 3 and 4 on the customers of the Montana Power Company, has it?

A Not independently. However, we do have all these rate people appearing before us. We have had PP&L; we have had the Montana-Dakota utility, and we do have an understanding to a great extent of the other facilities which are being built to serve this area.

Q The Pacific Power and Light Company is also an applicant in this proceeding?

A That is correct.

Q And they also serve residents of Montana, do they not?

A They serve in the Northwest corner.

Q Is there a cost-of-service study presently being undertaken by the commission staff?

A No, it's not one relating to this particular -- we are doing some work on a general plan, but not in regard to any particular cost of service of any of these companies.

Q It's the legal duty of the Montana Public Service Commission, is it not, to regulate the utilities, including the Montana Power Company and the Pacific Power and Light, and to set rates that are just and reasonable?

A It is a duty of the Public Service Commission, as I see it, to see that utilities furnish a service which the -- and all of them - to furnish the services which the public requires at the, as I said, the most reasonable rate that is possible, therefore, it is our problem to see that we do not make what you might call investments which may or may not be good for the rate bearer.

Q And in accordance with the duty of the Public Service Commission, they are funded, are they not, by the legislature of this state in order to perform their legal function?

A Well, they're funded to the extent that the legislature may see fit to fund them.

Q And in the event that cost-of-service studies are necessary for the purpose of enforcing the obligations which you gentlemen have by law, then you would expect the Montana legislature to adequately fund the Public Service Commission in order to effect your legal duties?

A That is correct, but the difficulty that you run into as far as the Public Service Commission is concerned is I don't think that the general public, and including the legislature, understands the ramifications and the necessity and the work that there is involved in attempting to carry out the statutory duty of the Public Service Commission. Therefore, in my estimation at least, they never have had and it doesn't look in the future as if they possibly will have, for some time at least, the necessary funds to do the job that should be done. And under those circumstances when you complicate it -- we just want a reason for appearing here -- is the fact that if the board decides in favor of this, then it is going to cost money to operate and police the operation, because we have a five company, or four company matter here, a consortium, and we have both interstate and intrastate problems involved, and we will have a question as to the allocation of both plant and costs between the various partners in this involvement.

Q Aren't the allocations of costs relative to the capital expenditures of units 3 and 4 set by contract between the consortium members?

A Well, they are, but we have to check those to see that they're correct, because there's lots of testimony that comes into a rate case. I've handled quite a few of them and sat on quite a few of them, and the testimony that comes in has to be very carefully checked because sometimes we do not find that it's necessarily exactly correct.

Q Is the Public Service Commission of Montana, for the purpose of this record, now engaged in a rate hearing dealing with the Montana Power Company and Pacific Power and Light?

A Yes, we've had both of them before us this year.

Q And have those matters been submitted to you for decision?

A That is correct.

MR. PETERSON: That is all I have.

HEARINGS EXAMINER: Mr. Doty.

Redirect, by Mr. Doty:

Q Mr. Gilfeather, with regard to --

MR. PETERSON: Just a moment, Mr. Doty. For the record I'm going to object to any examination of this witness by any attorney on the basis that the Public Service Commission has not registered as a party in this proceeding; on the second basis that Mr. Gilfeather appears as a public witness and under the rules of the

Hearings Examiner redirect or examination of a public witness has not been committed by your ruling.

HEARINGS EXAMINER: I understand your objection, Mr. Peterson, and it may be well taken. However, it's my view that if a public witness is accompanied by his own counsel, he will be entitled to a redirect examination. He will not be entitled to be examined by any of the registered parties, however. So you may go ahead, Mr. Doty. The record will show Russell Doty is here with Mr. Gilfeather as his attorney; Mr. Gilfeather is appearing as a public party. Go ahead, Mr. Doty.

Q Thank you. Commissioner, Gilfeather, in answer to the question posed of you, "aren't allocation of costs set by contract," is it the position of law of the Public Service Commission that a utility can put itself beyond regulation by entering into a contract?

A A contract, to my estimation and understanding of the law, has to be subject to the regulation of the commission, and therefore, I do not believe that they can set their duties insofar as allocation is concerned. It would depend upon what property was used and useful in the state of Montana and what property was used and useful someplace else.

Q With regard to the Pacific Power and Light case which has been submitted for decision, in that case did Pacific Power and Light file a cost-of-service study with the commission?

A No.

Q And did they give a reason for not filing that?

A Well, the testimony as I remember it, I haven't read the transcript lately, but the evidence was that their cost-of-service study was not up-to-date, and they couldn't make it; they couldn't give it pertaining to this case.

Q Do you recall whether or not the Washington Water Power Company filed a cost-of-service study with the rate increase that you just decided?

A No.

Q Your answer is that you don't recall?

A No, I don't.

Q You have stated that generally with regard to the rate cases that have been before you, you have some feeling for the need for additional generating and transmission facilities. Do you have any feeling about the effect of the present rate structures of these utilities in creating demand which would cause alleged need?

A Well, one of the problems that will be confronted with the extensive expansion of companies is going to be that we're certainly going to have to reorganize our rate bases, or rate classification and structures, because at the present time they are not, in my estimation or in the estimation, I believe, of the majority of the commission, sensitive to the needs of the people in regard -- that is, in other words so that people are paying for the needs which they have acquired or which they are acquiring. In other words, we're going to have to change the end rates to a great extent, and I think industrial people are going to have to bear a greater share of the cost.

Q Do you understand the term tail-block rate structure?

A To a great degree, I do, a pretty good degree, I believe.

Q Do you know whether any of the applicants in this case have that kind of rate structure?

MR. PETERSON: To which I'll object on the grounds that this is immaterial, irrelevant and beyond the scope of any of the cross-examination and the statement of the witness.

HEARINGS EXAMINER: Sustained.

Q Is it your opinion, then, that the rate structures of the applicant utilities in this case as they have appeared before the commission, are such that they would tend to create more demand for energy than if they were otherwise structured?

A Mr. Doty, I have to be rather careful what I say at any hearing in regard to what I think or what I don't think because of the fact that I have two or three cases before me, and therefore I cannot comment on what I do think or what I do not think. I think when you read the decisions that are handed down in these particular cases, you may find out what we think. I do say this, I feel that in the event that you are going to have extensive expansion, we are going to have to change to some degree certainly our rate structures so that they are more fair and allocate the cost on a wider basis than what they have in the past, and what the majority of them haven't. However, we do have at the present time before us cases which do indicate that there is a recognition by utilities to a certain degree of this need and of this problem, but I do not wish to make a given statement of opinion as to what I think on some of these things, particularly those things which I have before me.

Q Mr. Gilfeather, on the one case which you have decided with regard to Washington Water Power, do you recall whether or not you ordered a flattened rate structure in that case?

MR. PETERSON: To which I'll object on the grounds it is immaterial, irrelevant and incompetent and beyond the scope of the witness' direct testimony and cross-examination, and again is not the best evidence relative to the opinion.

HEARINGS EXAMINER: Sustained. We're not going into the rate structures or rate hearing; I think that's a subject for the Public Service Commission and the Board of Natural Resources is not going to be able to handle that one along with all the rest they've got.

MR. DOTY: Thank you.

HEARINGS EXAMINER: Thank you, Mr. Doty. Mr. Peterson?

Re-cross, by Applicants

By Mr. Peterson:

Q Mr. Gilfeather, do I understand your testimony here relative to the cases pending before the Montana Power Company and Pacific Power and Light to be a coming attraction of a decision?

A To be what?

Q A coming attraction or a prelude to your decision?

A No, I do not. I am making this statement pertaining to Colstrip 3 and 4, not to any of the other rate cases or any probability before us, because as I state in my statement, there would be many factors and they would have to be considered at the time that the matter came before us.

Q And I plead the matter was a little bit clouded, sir, by some of your answers and I wanted to clarify it for the record so your position would not be other than what you stated it.

MR. PETERSON: That's all, Mr. Davis.

HEARINGS EXAMINER: Anything further on redirect?

MR. DOTY: No, thank you, Mr. Davis.

HEARINGS EXAMINER: Thank you, Mr. Gilfeather.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Dr. Vermillion.

C. DALE VERMILLION, M.D., appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF DR. C. DALE VERMILLION WAS DIRECTED TO BE INSERTED AT THIS POINT.)

C. DALE VERMILLION. M.D.
THE BILLINGS CLINIC
BILLINGS, MONTANA 59103

PEDIATRIC AND ADULT UROLOGY

TELEPHONE
252-4141

March 8, 1976

Mr. Joseph Sabol
Chairman, Department of Natural Resources and Conservation
32 South Ewing
Helena, Montana 59601

Dear Mr. Sabol,

I would appreciate it if the enclosed material which I have written be submitted as public testimony in the hearing on approval of Colstrip Units 3 and 4.

Thank you very much.

Sincerely yours,

C Dale Vermillion

C. Dale Vermillion, MD

C. DALE VERMILLION. M.D.
THE BILLINGS CLINIC
BILLINGS, MONTANA 59103

PEDIATRIC AND ADULT UROLOGY

TELEPHONE
252-4141

March 8, 1976

Mr. Joseph Sabol
Chairman, Department of Natural Resources and Conservation
32 South Ewing
Helena, Montana 59601

Dear Mr. Sabol,

Considering the complexity of your Committee's deliberations concerning approval for Colstrip units # 3 and 4, I hope that I am not being presumptious in sending you my thoughts concerning these plants.

After reading local news releases in the Billings Gazette, I often get the impression, or implication, that the Billings business community is solidly behind the construction of these Colstrip plants. Certainly, the Billings Chamber of Commerce gave this impression in its news release of January 13, 1975 when it supported Units 3 and 4's construction. As a member of the Billings Chamber of Commerce at that time, I think it worthwhile to point out that at no time was the general membership of the Billings Chamber of Commerce notified that such a discussion was taking place or that the Board of Directors was about to issue such a recommendation. In so much as I understood that at least one member of the Board of the Billings Chamber of Commerce was an officer in a Company receiving royalties from the sale of coal in Eastern Montana, I felt, and still do, that this recommendation emanated more from self interested individuals than from a body supposedly interested in the general welfare of Montana. Not to belabor the point further, I enclose a copy of a letter sent to the Board by 20 members of the Billings Chamber of Commerce complaining of their decision and stating their dissenting view.

I would also like to point out that the Yellowstone Valley Medical Society, composed of approximately 150 physicians, adopted a resolution on January 22, 1975 suggesting, that for various environmental and social reasons, that Colstrip Units 3 and 4 not be approved until the full impact and implications of Units 1 and 2 could be evaluated.

I personally feel quite stongly that, although large areas of Eastern Montana will almost certainly be stripmined for coal, that this should be burned at the load centers. The location of these plants on the West Coast would seem much more economical, as the Environmental Impact Statement suggests, and might be a stimulus for energy conservation in these areas - a concept to which even the private utility companies pay lip service. I feel that Montana is doing more than its share to help solve the United State's energy needs by strip mining it's land and providing its coal. To burn the coal here as well seems too great a sacrifice for Montana and too easy a solution for wasteful West Coast energy consumption. Furthermore, as the Environmental Impact Statement points out, shipping the coal to the load centers would provide more long term jobs than Colstrip Units 3 and 4, although their location in Montana would probably mean more profit for local utilities as well as several Billings businessmen.

In summary, I feel very strongly that Colstrip Units 3 and 4 should not be approved until the impact of Units 1 and 2 can be evaluated and until the need for these plants can be demonstrated in Montana. While not attempting to speak for either the Billings business or medical community, I think the resolution of the Yellowstone Valley Medical Society as well as the accompanying letter suggests considerable support for my views.

Thank you for your consideration.

Sincerely yours,

C Dale Vermillion

C. Dale Vermillion, MD

THE BILLINGS CLINIC
NINTH AVE. NORTH AT BROADWAY
BILLINGS MONTANA 59103
406·252·4141

INTERNAL MEDICINE
ALFRED M FULTON M D
ALLAN LEE GOULDING M D
GEORGE R BROSIUS M D
PAUL V HOYER M D
WARREN D BOWMAN JR M D
HEMATOLOGY
DONALD L HICKS, M D
JAMES D KNOSTMAN M D
NEPHROLOGY
RONALD H SMITH, M D
INFECTIOUS DISEASES
PHILLIP E GRIFFIN JR M D
RHEUMATOLOGY
WALTER C DEGNAN M D
JOHN R BURG M D
CARDIOLOGY
GENERAL, THORACIC, CARDIAC AND VASCULAR SURGERY
EDWARD W GIBBS M D
JOHN W HEIZER M D
O ADRIAN JOHNSON M D
HEWES D AGNEW M D
KIRBY S ORME, M D
NEUROSURGERY
ROBERT C WOOD, M.D
LASHMAN W SORIYA M D
ALLERGY
L BRUCE ANDERSON JR., M D
JAMES B LARSON, M.D.
DERMATOLOGY
THOMAS P GORMLEY, M D
WILLIAM H SMOOT M D.
OBSTETRICS AND GYNECOLOGY
LEONARD A BARROW, M D
EDWARD F RANDAK M D
LEE A RAITZ, M D
OPHTHALMOLOGY
JAMES S GOOD, M D
ORTHOPEDICS
WALTER H HAGEN, M D
STERLING R HAYWARD, M D
STANLEY J YODER, M D
OTOLARYNGOLOGY
STEPHEN A KRAMER M D
PATHOLOGY
EDWIN C SEGARD M D
GORDON L COX, M D
PEDIATRICS
ALLEN P HARTMAN, M D
W DEAN WILCOX, M D
J PATRICK SAUER M D
UROLOGY
ROBERT S HAGSTROM, M D
JOHN A SHAW, M D
C DALE VERMILLION M D
RADIOLOGY
JERRY D WOLF M D
ALAN D FLYNN M D.
V PAUL JOHNSON M D
WILEY R BLAND, M D
CONSULTANTS
IMMEDIATE CARE
OSCAR W BALTRUSCH, M D
MEDICAL DIRECTOR
EDWARD W GIBBS, M D
ADMINISTRATION
WILLIAM R NICHOLSON
KATHLEEN SULLIVAN
LUCILE LOVE

January 16, 1975

Billings Chamber of Commerce
Box 2519
Billings, Montana 59103

att: Mr. Charles N. Searl
Executive Vice President

Gentlemen:

We recently received our weekly bulletin from the Billings Chamber of Commerce and were distressed to find that the Board of Directors had approved a recommendation of support for Montana Power Company's Steam Generating Plants # 3 and 4 at Colstrip and the accompanying transmission lines.

As individual members of the Billings Chamber of Commerce and as representatives of Billing's biggest single "industry", we feel we must disagree strongly with this decision. You give as a reason for expanding the MPC generating capacity the "expansion of ... facilities at St. Vincent's Hospital". This suggests that the Chamber's Board of Directors has either done some very indifferent research into this matter or has been misinformed by individuals who should know differently. As must be apparent to those of the Billing's Chamber of Commerce who are members of the Board of Trustee's of the two hospitals, St. Vincent's Hospital is, by law, not allowed to expand it's bed capacity but only to "replace" them with beds that meet Federal standards which they currently do not do. We assume that the remainder of your stated "reasons" are on more solid ground than the one mentioned above.

We presume you have read the Environmental Impact Statement issued in November, 1974 by the Department of Natural Resources and Conservation concerning these steam generating units. As you must know from reading this, MPC power demands have increased only 3.9% in the past 5 years (1968 - 1973). This would hardly seem to indicate a huge increase in power will be needed in the immediate future in Montana. As I am sure you are also aware, the Environmental Impact Statement also notes that Colstrip #3 and 4 will provide "the delivery of 1390 megawatts of peak power to West Coast utilities." This again suggests to us that there is not a huge demand for this power anticipated in Montana nor is it intended for Montana. Thus, building these plants would seem to violate the intent and spirit of the 1973 Montana Utility Siting Act which states that need for such power in Montana must be demonstrated prior to such plants construction. We submit that this has not been done and that Montana

MEMBER OF AMERICAN ASSOCIATION OF MEDICAL CLINICS

would be better served by the transportation of this coal to those areas which require this power. As is also noted in the Environmental Impact Statement, the alternative of shipping the coal out of the state would provide slightly cheaper power and provide more permanent jobs in Montana than burning the coal in Montana steam generating plants .

Furthermore, we think a recommendation of support for these plants prior to the completion and evaluation of Colstrip 1 and 2 is unwise considering the far reaching social implications for Eastern Montana as well as the problem of significant air pollution with as of yet untested anti-pollution devices. We feel that such a recommendation of support for Colstrip 3 and 4 at this time smacks of economic opportunism on the part of the Billings business community which you represent.

In summary, we must disagree very strongly with your recommendation of support for Colstrip 3 and 4 until such demand for these utilities can be proven in Montana and until Colstrip units 1 and 2 can be evaluated as to their social and environmental impact.

Sincerely yours,

C. Dale Vermillion, MD	C. Dale Vermillion
William H. Smoot, MD	William H Smoot
Stephen A. Kramer, MD	Stephen A. Kramer
O. Adrian Johnson , MD	O. Adrian Johnson
John W. Heizer, M.D.	John W. Heizer
S. Kirby Orme, M.D.	S. Kirby Orme
Hewes D. Agnew, M.D.	Hewes D Agnew
George R. Brosios, MD	
Donald L. Hicks, MD	Donald L. Hicks
James S Good, MD	James S Good
Paul Hoyer, MD	Paul V Hoyer
Warren D Bowman, MD	Warren D Bowman
James D Knostman, MD	James D. Knostman
Phillip L Griffin, Jr, MD	Phillip L Griffin Jr.

Ronald H. Smith
Ronald H Smith, MD

Allan L. Goulding
Allan L. Goulding, MD

W. Dean Wilcox
W. Dean Wilcox, MD

L. Bruce Anderson MD
L. Bruce Anderson, MD

Walter C Degnan
Walter C Degnan, MD

John R. Burg
John R. Burg, MD

EXAMINATION OF DR. C. DALE VERMILLION

Cross, by Applicants

By Mr. Peterson:

Q Dr. Vermillion, how long have you resided in Billings?

A Since July of 1971.

Q And what is your native -- where is your home?

A Western Kansas.

Q Kansas?

A Yes, sir.

Q You are with the Billings Clinic?

A Correct.

Q How long should we wait on the assessment of units 1 and 2 in order to determine the environmental and social impacts?

A I don't think that I can really make any definite statement, but certainly I think that starting construction of Colstrip 3 and 4 at the time suggested will not allow anyone to really adequately know what the social or environmental impacts are going to be.

Q What are the -- do you know the emission rates that have been projected for units 1 through 4 if they go on the line?

A I don't at this time. I've read the Environmental Impact Statement and my background is such that I can't really say I remember much of the data.

Q When you said you read the Environmental Impact Statement, is that the draft EIS of the Department of Natural Resources?

A I've read the majority of the big blue folder.

Q The blue books?

A Yes.

Q Did you also read its counterpart, the environmental assessment by Westinghouse prepared on behalf of the applicants?

A No, sir.

Q Have you read any of the testimony in this proceeding?

A Mostly just what has been produced in the Billings Gazette, which I suppose is somewhat limited by --

Q Some of us don't consider that to be authoritative, but you have not read any of the transcript?

A No, sir.

Q You do not oppose strip mining in the Colstrip area?

A I would have to say yes, but I think it's a foregone conclusion it's going to be strip mined. The coal is here, not elsewhere.

Q Are you familiar with the fact that the Montana Power Company at the present time, in order to serve its customers, is an importer of electrical energy?

A I believe that's the case. On the other hand, I think with Colstrip 1 and 2 on the line, you're projecting that at least 50 percent of that power will be sent out of the state; is that right?

Q Are you also familiar with the fact that most of the REA's in the state, which serve our agricultural economy are importers of electrical energy?

A I'm not familiar with that data.

Q Are you familiar with the fact that some of the REA's in this state are presently planning investments in generation plants in Oregon and Washington?

A No, sir, I'm not.

Q Finally, Dr. Vermillion, I believe you stated in your statement that you're here on behalf of the Yellowstone Valley Medical Society, the members of that society; is that correct?

A No, sir, I'm not. I'm not under -- I'm coming in under my own volition and not at their behest.

Q All right. I wanted to get that clear.

A I'm just pointing out that this resolution was taken by the Yellowstone Valley Medical Society.

Q What was the vote?

A I can't tell you this. Again, it's been about 6 months since that was taken. I don't really know.

Q Was the vote unanimous?

A The vote was not unanimous.

Q All right, thank you, Dr. Vermillion.

HEARINGS EXAMINER: Do you have anything you wish to add, Doctor?

WITNESS: No, I think my statement's pretty much --

HEARINGS EXAMINER: Very well. Your statement has been received in evidence, and we will recess until 1:00 P.M.

(WITNESS EXCUSED)

(RECESS AT 12:05 P.M.)

Following the luncheon recess, the hearing reconvened at 1:00 P.M. on March 16, 1976.

APPEARANCES: (In addition to morning session.)

Northern Cheyenne Tribe, Inc.

Peter Michael Meloy, Esq.

HEARINGS EXAMINER: Mr. Farley?

BURTON FARLEY, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF MR. BURTON FARLEY WAS DIRECTED TO BE INSERTED AT THIS POINT.)

To the Board of Natural Resources and Conservation:

I am Burton Farley, formerly of Colstrip and now living in Huntley.

My family pioneered the Castle Rock-Colstrip community in the early 1900's. W. L. Cooley and his father Albert Cooley were some of the first homesteaders in the area and assisted the first survey party to work this county. They originated the first mail service and post office at Castle Rock by saddle and pack horse from Forsyth, then continued with a U.S. mail contract for 22 years. Cora Cooley Farley was the first female stage driver (truck) in the 1917 to 1927 period. She hauled the first engineer, a Mr. Harry Boyle, with his crew and tools to prospect the Colstrip Coal Mine for the Northern Pacific Railroad. That was the first shovel work done--the coal sample was taken using laboreres. From this 640 acre homestead plus an additional 320 acre homestead a large holding has been accumulated--some 50,000 acres--which supports and furnishes livelihood to some 50 people in 12 modern homes.

All was well when the power company wanted seventeen miles of right of way in the early 1920's for the development of Colstrip and ultimately, power for the southeastern part of Montana. We gave them the right of way. They have three more transmission lines on this property now, plus a large coal lease under the surface that we own. The coal belongs to everyone, but the surface does not. We have made continuous use of the ranch for 67 years, producing both grade and registered cattle, wheat and feed grain, and alfalfa seed and hay. We would like to continue doing so. The grass in the area is recognized as some of the best in the state for both winter and summer pasture, as Montana State University has found from samples it has taken.

If the coal has to be harvested, the railroad has an established right of way across our state already that could easily be widened to two lines if necessary. A larger group of employees would be used all the way across the state for a very long time--all established in permanent, tax-paying homes. If Colstrip 3 & 4 are built an influx of transitory workers will result, creating all the problems associated with them. When construction is over, though, a skeleton crew will be left to operate the plants, and the power will mostly go out of the state. One company will then have controlled the energy from beginning to end--whether the end be a light bulb or a huge commercial motor.

Our family has been community-minded all along and continues to be. We have worked with the county fairs and 4-H youth projects for 25 years, and have been members of a livestock lending agency, the Production Credit Association, for 27 years. We bought and rebuilt the present grain elevator, making a local loading point for grain and a distribution point for local livestock feeds. Right now the elevator is not looked at favorably in the middle of the "model" town. In fact, we still have the elevator, but just barely. On land right beside the elevator in Colstrip we had had a gas station and trailer park since the 1950's when the mine was in production. In 1967 I made a deal with three Montana Power Company officials to improve the trailer park. I rebuilt it to accomodate six families. In 1972 Montana Power Company told me to evict the renters so the company could build houses for four families. This put the operation out of business at considerable financial loss to me. At the present time there is not even a place at the elevator where the elevator operator can live.

In addition, we acquired the Colstrip stockyards from the Burlington Northern Railroad (the railroad retained the land), and turned them over to the community for people to ship their livestock. Recently MPC acquired the land from the B.N. and told the local community livestock producers to demolish the yards and scale to make way for their profit-making operation. With the present livestock cost-price squeeze this will produce yet another added expense and hardship to the native Colstrip people and make it economically impossible for some producers to use the stockyards at all.

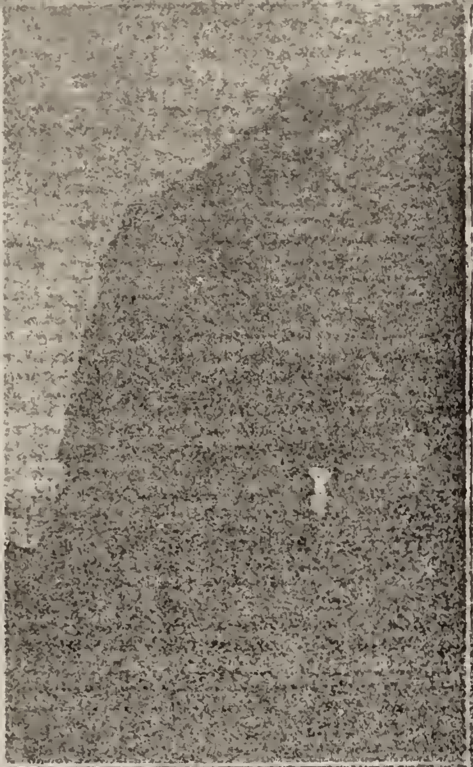
Also, I organized the Colstrip Roping Club and built an arena on B.N. land with the railroad's permission. The arena provided family recreation for the members of the club, which is made up of both ranchers and townspeople who work for the power company. The material for the arena was purchased locally and a lot of hard work and expense were put into it. When MPC acquired the land from B.N., the company told the roping club to get the arena out of their way so they could build settling ponds for the power plants. Loss of this arena would eliminate a community project that has provided recreation for area residents, both ranchers and coal-related people.

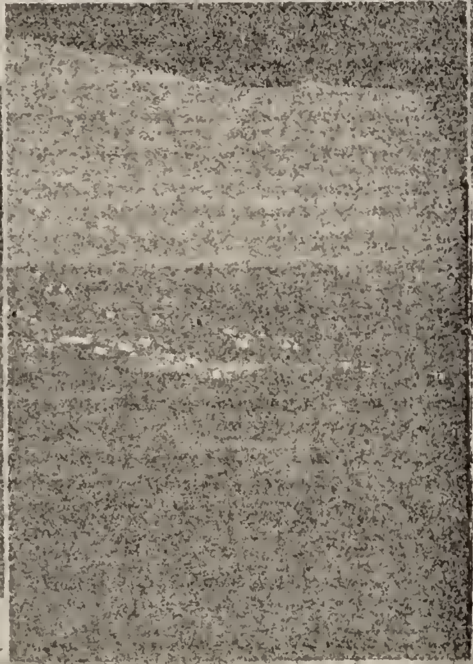
Due to the building of the power plants in the Colstrip area the whole commity was disrupted, as was our family and our purebred livestock operation. The Farley Hereford Ranch was established in the registered Hereford business in 1935. For 41 years we have built a reputation that is will known throughout the United States and Canada. When people of the livestock industry think of Leo Farley's purebred registered livestock, they automatically relate to tch Colstrip ranch. How do you move 41 years of reputation and facilities? Because that is what we are being forced to do. Unlike a commercial cattle ranch, the registered purebred livestock producer must maintain special facilities. Montana Power Company built their coal handling facilities 600 feet from our main ranch headquarters, which included our home, our herdsman's home, and our sale barn. Thus we are being forced to move our families and our purebred livestock operation at a cost of $150,000 to Farley Herefords.

The land is devoted to the careful, sustained self renewing production of food and fiber.

Patiently, this land has been developed by the same family owners from the original 320 acres to the present extensive holdings. Tilled and cared for so now it supports thirteen family units, each living in its own modern home. The land supplies a cash livelihood for some fifty people. Its production of grain and meat is surely a part of our nation's food supply.

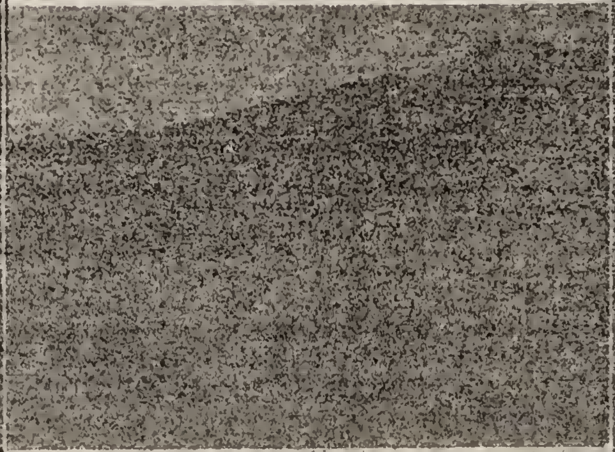
Grandmother lived here





Coal IS ENERGY
Food IS ENERGY

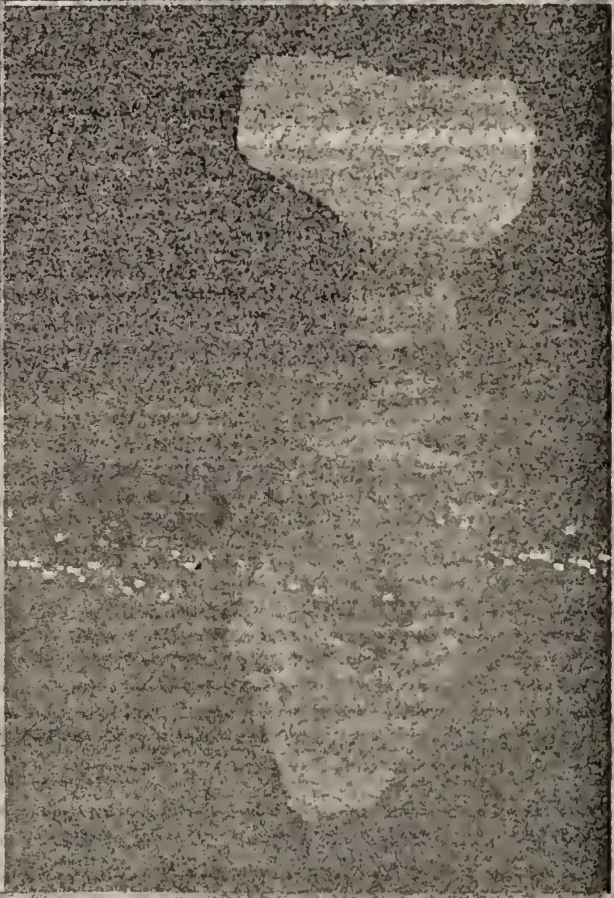
We can get both, but not if we destroy the productive surface.



The pictures in this little folder are snapshots taken at random over the ranch property. Hopefully, they will give people touring this area a quick glimpse of this Eastern Montana food producing operation.

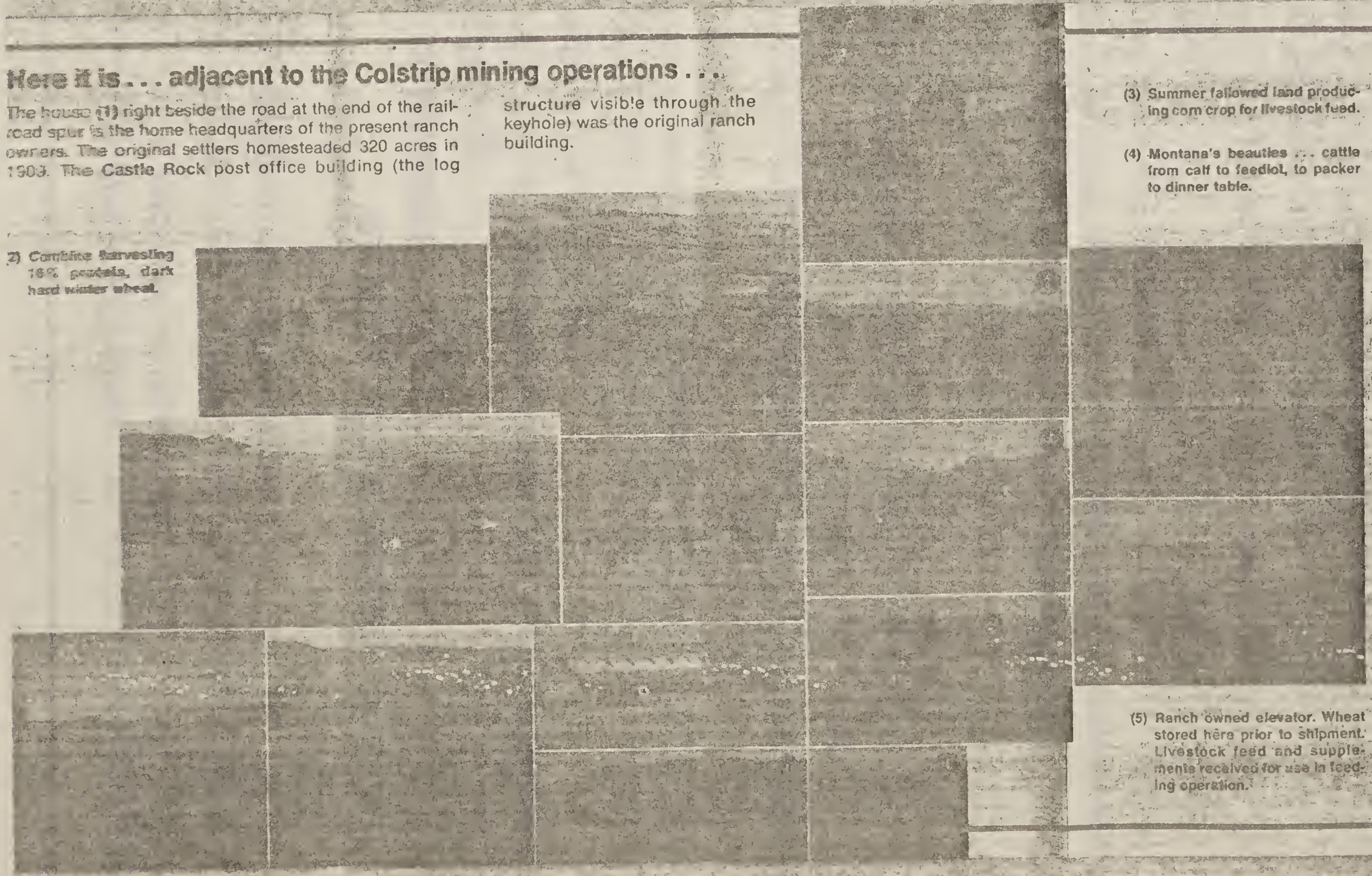
take a look through the keyhole at a

TYPICAL EASTERN MONTANA RANCH



Here it is . . . adjacent to the Colstrip mining operations . . .

The house (1) right beside the road at the end of the railroad spur is the home headquarters of the present ranch owners. The original settlers homesteaded 320 acres in 1903. The Castle Rock post office building (the log structure visible through the keyhole) was the original ranch building.



2) Combine harvesting 16% protein, dark hard winter wheat.

(3) Summer fallowed land producing corn crop for livestock feed.

(4) Montana's beauties . . . cattle from calf to feedlot, to packer to dinner table.

(5) Ranch owned elevator. Wheat stored here prior to shipment. Livestock feed and supplements received for use in feeding operation.

HEARINGS EXAMINER: Mr. Farley, since you appear as a proponent in this matter -- or, an opponent in this matter, your statement will go in evidence and Mr. Peterson can cross-examine.

EXAMINATION OF BURTON FARLEY

Cross, by Applicants,

By Mr. Peterson:

Q Let's see, you are Burton Farley, now living at Huntley, Montana; is that right?

A Yes.

Q What is your age, Mr. Farley?

A Forty.

Q Are you a stockholder in Farley, Inc., a Montana corporation?

A Yes.

Q What percentage of stock do you own?

A A third.

Q Who are the other stockholders, sir?

A My immediate family: Dad, Mother, and sister.

Q Are the 50,000 acres which are owned by the corporation still used for ranch purposes?

A Yes.

Q When did you move from Colstrip to Huntley?

A In September of '74, I guess it was.

Q Were you living on the main ranch?

A Yes.

Q The ranch headquarters?

A Yes.

Q Now you state in your statement that the Montana Power Company built their coal-handling facility 600 feet from your main ranch headquarters, which included your home, your herdsman's home, and your sales barn, and that you're being forced to move your families and stock -- livestock operation at a cost of $150,000.00?

A No. We were forced to move because they built it out there and you can't live with the noise and the dust and the corruption that goes on there 24 hours a day, 7 days a week. The $150,000.00 will be in addition to what it's going to cost -- that's what it's going to cost to replace the facilities to handle the cattle.

Q What facilities, sir?

A To build a sale barn and supporting facilities, the corrals and the various pastures. We run those cattle, registered cattle, in smaller type patches where we can run control weights on them and get performance records on them. I spent 40 years -- my Dad, and quite a lot of my lifetime been put into developing the home ranch into the smaller section pastures, quarter section pastures that it takes to handle those cattle. On an ordinary ranch you could just take the fences out, have a summer pasture and a winter pasture,and go on from there, but with the registered cattle you have to keep them split up all the time for your different records and to know what bulls the cows are bred to, and so forth, and to handle the bulls in smaller bunches. If you put -- you can handle about 20 head of bulls in one bunch -- if you put more in, well, they hurt one another.

Q Well, you said you're going to replace the corral and the sales barn; is that right?

A With our operation, yes. Feeding setup, too. Put in a scale. That type of thing.

Q What was the reason that you moved from the home ranch?

A Well, can't live there with that noise and corruption and dust flying and roads being torn up and hard to get out, and so on. It's just kind of a necessity to get out of the way.

Q Did you make the sale of that 40 acre spread to Western Energy?

A Made a trade with Montana Power.

Q Was the name of the buyer on the contract Western Energy or Montana Power?

A I believe Western Energy. They're all the same, though.

Q Now, the trade involved approximately $200,000.00 for the 40 acres?

A 140.

Q 140,000?

A Yes.

Q You got 640 acres of land from Western Energy which they had purchased for the trade, right?

A Undeveloped.

Q And that was land that was located south and west of Colstrip, the 640?

A No, the 640 that we traded for is in the Pryor Creek area, out of Huntley.

Q I see. That was valued about $145,000.00?

A Yes.

Q And did they also pay you $40,000.00 for a new home?

A No, that was included in that.

Q That was included in the $145,000.00, or on top of it?

A It was included in it. That was the total price.

Q 145,000?

A Yes, I'm sure of that.

Q Are you certain of that?

A No, I'm not exactly certain of that without having the figures in front of me.

Q Well, isn't it a fact, Mr. Farley, that you got paid almost $200,000.00, which included an exchange of 640 acres for the 40 acre home ranch property, a $40,000.00 new home, and a cash payment, cash down payment of $14,500.00?

A Those figures could be correct, yes.

Q And you were also granted the right to occupy the house rent-free until January 1, 1976?

A Yes.

Q You were also granted the option to lease the ranch facilities until January 1, 1976?

A Yes, to give us time to make this move. It takes quite a little time, you know.

Q Are you a member of the Northern Plains Resource Council?

A No.

Q Is your father?

A I think my father's made some small donations to them, but as far as being a member, no.

Q You're no longer bothered now with the noise and the dust and the corruption because you've moved your home spread to

Huntley; is that right? 70 miles down the road?

A Well, personally I am, part of the time, because I spend quite a little time down there.

Q But that's not where your residence is?

A Oh, I don't know where I call my residence; I'm in between now.

Q Are you living at Colstrip?

A Part of the time I live there, and then I stay with my family at Huntley in the new house up there.

Q I see. Where do you stay at Colstrip when you're there.

A Got a trailer house parked in the yard down there, next to the big house. Previous to that, I stayed with some hired men.

Q In 1967 when you made the deal with three Montana Power Company officials to improve a trailer park, what was the situation?

A You mean the situation of the trailer park?

Q Yes.

A Well, like it states there, my Dad has bought that station, the gas station there, and they put in a temporary trailer court thing there, and I discussed it with these Montana Power Company people to go ahead and put one in because all this influx of people was coming in there and I thought I'd go into a little private enterprise. The condition of it was quite bad. Had to remodel the whole thing.

Q It was a business investment as far as you were concerned?

A Oh, yes.

Q Did you lease the property from the Montana Power Company?

A Well, if you want to get into that, yes, I made an agreement with them that morning, and they were to draw me up a lease. I paid lease money all the time to them.

Q How much did you pay, sir?

A $50.00 a month for a service charge. And they had -- the story I get, anyway -- they had the lease made up and in the office in Butte when it burned down, and then it just takes, I guess, so long afterwards -- I never did have a written lease from them. I had a verbal agreement.

Q How long were you operating this trailer park?

A Oh, a couple of years.

Q It took you to construct it from 1967 to about 1970?

A Oh, to get it into the requirements, yes. There were some people lived in it when there wasn't anything there, just a place to plug in electricity and hook onto the sewer, and we developed some yards, and we're really getting it --

Q How much is it going to cost to construct the new yards and scale?

A For the public stockyards?

Q Yes.

A I don't have any exact figure, but I would estimate in the neighborhood of $20,000.00.

Q That land was owned by the Burlington Northern?

A Yes. We leased the land from the Burlington Northern.

Q Where is the new stockyard and scale going to be constructed?

A The proposed site's over on the Rosebud.

Q Who owns that ground?

A Greenleaf Land and Livestock.

Q Who, sir?

A Greenleaf Land and Livestock. That's the proposed site. I don't know if anything's been definitely done on it or not.

Q Do you still have 50 families -- 50 people, excuse me, in the homes on the ranch?

A Yes. That varies from day to day through labor turnover, but some people been there with us for 22 years.

Q Right. How many Northern Cheyenne Indians do you employ?

A Right at the moment I don't have any, but I have had them in the past.

Q None at the present time?

A No.

Q When's the last time you had any Northern Cheyenne member of the tribe under your employment?

A Oh, probably '59 or '60, somewhere in there.

MR. PETERSON: I have nothing else. Thank you, Mr. Farley.

HEARINGS EXAMINER: Do you have anything else, Mr. Farley?

WITNESS: I don't think so.

HEARINGS EXAMINER: Very well, thank you, sir, for your testimony. Gene Spiff? Is there a Gene Spiff here? Karen Brenner? How about Madeline Daniel?

MADELINE DANIEL, appearing as a public witness, having been first duly sworn upon her oath, was examined and testified as follows:

HEARINGS EXAMINER: I understand you don't have a written statement?

WITNESS: No.

HEARINGS EXAMINER: You just want to make a brief statement on your own. And you're an opponent?

WITNESS: Yes.

HEARINGS EXAMINER: Very well. Sit down and speak into the mike, please. Would you state your name and address.

WITNESS: Yes, I will. My name is Madeline Daniel and I live in Butte, Montana.

ORAL STATEMENT OF MADELINE DANIEL

I'm a housewife and I'm here on my own. I'm not representing anyone. I just have a small statement to make and that'll be it.

I've been troubled by the concept of Colstrip 3 and 4. I question how the coal-fired generators will improve my life and benefit the state I love. I sincerely wonder whether the Pacific Northwest and its citizens have the same reservations as I concerning the energy they will consume.

I have the same problem that many of Montana's private citizens struggle with: what seems good for economic progress is not necessarily good for the air I breathe or the water I drink. Colstrip will undoubtedly boost Montana economy, but will it not damage some of the reasons that I live in Montana.

The Department of Health has some stringent regulations applying to the air and water quality around Colstrip. Who will pay for this supervision of the coal-fired generators? Will variances be granted when the plants malfunction? How strictly will agencies enforce the law?

Generators 3 and 4 are needed to fill the demand for more power. Do citizens need more power? They may. Personally, I'm willing to turn down my thermostat, turn off lights, and forego other conveniences that Colstrip 3 and 4 may provide. Why should I sacrifice these comforts? I was born and raised in Montana and I hope my children may know the same happiness I knew growing up in Montana. Montana is very pure, wild and unique. Colstrip will certainly not enhance the state's rugged beauty. What price will be paid for a temporary answer to the energy crisis?

That's all.

HEARINGS EXAMINER: Mr. Peterson will have the right to ask you some questions.

EXAMINATION OF MADELINE DANIEL

Cross, by Applicants,

By Mr. Peterson:

Q Mrs. Daniel, am I correct that you are a member of the board of directors of the Environmental Information Center?

A Yes, I am.

Q How long have you been a member of that board of directors?

A Oh, just about a month.

Q Have you attended any meetings of the board?

A One.

Q Was Colstrip 3 and 4 discussed at that meeting?

A It might have been, briefly, before I got there. I was a little late for the meeting.

Q The Environmental Information Center has gone on public record as opposing the construction of Colstrip units 3 and 4, has it not?

A Yes, I believe so.

Q And the Environmental Information Center has gone on record opposing the construction of the Clyde Park line to Big Sky?

A Now, I'm not familiar with this at all since I'm just on -- just got on the board.

Q And has the Environmental Information Center taken any position relative to the Burlington Northern Circle project, a phosphate fertilizer plant?

A I'm not aware of that.

Q Has the Environmental Information Center advocated the construction of any industrial start in the state of Montana since it has been organized?

A I'm not familiar with this at all.

Q I suppose, Mrs. Daniels, you're just like most of the housewives; you've got an electric stove?

A Yes, I do.

Q And a refrigerator?

A Yes, I do.

Q Do you have electric heat, or natural gas?

A Let's see. Electric heat.

Q And I suppose you enjoy the pleasures of television and radio?

A Yes, I do.

Q What do you think would happen if you had to curtail some of those activities? Would it change your life style?

A Yes, it would, but I don't think I would mind.

Q You'd be willing to do that?

A Yes. There are a lot of other things that give me pleasure.

Q Is it your position that the Board of Health of the State of Montana will be put in a position of having to grant a variance to the operation of Colstrip units 1, 2, 3 or 4?

A Well, I think what concerns me is that, who is going to regulate the health standards for the Colstrip 3 and 4.

Q Well, do you understand what the reporting requirements are of those units?

A Well, I understand that there's some very stringent regulations applied to --

Q Do you understand that the units are also subject to supervision, or will be subject to the supervision of the Environmental Protection Agency?

A Well, I'm aware that there is going to be supervision.

MR. PETERSON: All right. That's all I have.

HEARINGS EXAMINER: Do you have anything else?

WITNESS: Just one thing that I have to add, and that is that I came on my own. I was not notified by the Environmental Information Center.

MR. PETERSON: I think she said that.

HEARINGS EXAMINER: Thank you for coming. Jean Speth?

JEAN SPETH, appearing as a public witness, having been first duly sworn upon her oath, was examined and testified as follows:

HEARINGS EXAMINER: I understand that you're an opponent and that you don't have a written statement?

WITNESS: Yes.

HEARINGS EXAMINER: All right. Just sit down and if you'll give the reporter your name and address, please, and then just sit down and make your statement.

ORAL STATEMENT OF JEAN SPETH

I am Jean Speth. My address is 930 Monroe, Missoula, Montana. I was born and raised in Montana and I'm opposed to the proposed power line because it'll depreciate the land values of Montana.

Montana's biggest industry, or one of the biggest industries, is tourism. People visit here and they move here to get away from cities, large industries, pollution, and a myriad of power lines.

Montana now offers recreational land for camping, skiing, snowmobiling, fishing and hunting. I enjoy all of these things.

The proposed power lines will be detrimental to all of these attributes, I feel.

In my short lifetime I've seen many changes in Montana occur, and I would like to see them take a positive direction. I know they must happen, and instead of spending money shipping power out of Montana, I would like to see it used for an alternate method and I would like to see it also used to find ways to conserve energy.

EXAMINATION OF JEAN SPETH

Cross, by Applicants,

By Mr. Peterson:

Q I'm sorry, I didn't get your name.

A Jean Speth.

Q Jean, where do you reside?

A In Missoula. I'm a secretary there.

Q Are you married?

A No, I'm not.

Q How long have you lived in Missoula?

A Let's see. Fifteen years.

Q Are you a graduate of the university?

A No. I've been to the university for a few years.

Q For whom are you employed?

A Paul Brunner.

Q I didn't get that?

A Paul Brunner at Eco Realty.

Q And Mr. Brunner is the owner of Eco Realty, is he?

A Yes, he is.

Q And, Mr. Brunner, you understand, was a witness for the Northern Plains Resource Council, and testified here last week in opposition to the construction of Colstrip units 3 and 4?

A Yes.

Q You understand that?

A Yes.

Q Have you ever read a report on tourism in the state of Montana and its economic values by Paul A. Polzin, an economic professor at the university?

A No, I haven't.

Q How large an industry do you think tourism is to the state of Montana?

A I think it's very important. I can't give you any facts and figures. I see a lot of tourists in the summer.

Q You've never made any independent study of economic values of tourism in the state, or to the state, have you?

A No, I haven't.

MR. PETERSON: Okay. Thank you very much.

HEARINGS EXAMINER: Thank you very much. Mrs. Brunner?

KAREN BRUNNER, appearing as a public witness, having been first duly sworn upon her oath, was examined and testified as follows:

HEARINGS EXAMINER: Would you give the reporter your name and address, please?

ORAL STATEMENT OF KAREN BRUNNER

I am Karen Brunner. My address is Buffalo Trail Ranch, Ovando, Montana.

I am against the proposed Colstrip number 3 and 4 and the proposed power lines. First of all, I think it will lower our land values here in Montana. The tourists that we do have coming in come to Montana to see and enjoy nature at its best. They don't want the conglomeration of concrete and metal which they left at home. Also I feel that it lowers land values for the agriculture land owner. It lower his resale value when he's ready to sell his ranch, and I feel that the power line would interrupt grazing, and would interrupt the crops that the rancher has. And I feel if you drive the rancher away, then we'll all have to stop eating.

I was born and raised in New England, and I slowly watched the things that I loved, such as fishing, hunting, rural living, and hiking all disappear. So, these are mainly the reasons that I moved to Montana, and now I have these things. I have good fishing in most of the streams. I have elk in my driveway just about every day now. We have deer in our meadows. I have the freedom to hike just about anywhere and not encounter any other people. My daughter attends a two-room schoolhouse in Ovando, and I spend my days outdoors on the ranch. So, I'm enjoying the life I have now and I don't want to have to move again.

So, I think that this proposed Colstrip 3 and 4, and the proposed power lines, would change our way of living, and Montanans don't want this.

This morning, as I left our ranch and took my daughter to school, I stopped off at the post office and I spoke to the postmistress. Then I stopped at the local co-op to fill up our car with gas, and I happened to see two men that work on the county road crew, and they all wanted me to tell you they are against these things also.

That's all I have to say. Thank you.

EXAMINATION OF KAREN BRUNNER

Cross, by Applicants,

By Mr. Peterson:

Q Your name is?

A Karen Brunner.

Q Are you related to Paul Brunner?

A Yes. We have a ranch in Ovando.

Q And he's in the real estate business?

A Yes.

Q How long have you resided in Montana?

A Well, we've been on the ranch for six years, and then we were in Missoula for three years.

Q Does the ranch property that you own -- is it served by any electric utility, or REA?

A REA.

Q It is?

A Yes.

Q How do they get electricity to your ranch?

A What do you mean?

Q You said it's served by the REA. How do they get the electricity to you?

A It's not Montana Power. It's Missoula Electric Co-op. Is that what you mean?

Q Yes. And how does the Missoula Electric Co-op get the electricity to your home?

A Like everyone else.

Q They use the little lines?

A Right.

Q Do you know where the Missoula Electric Co-op has its source of energy supply to serve your ranch?

A No, I don't.

Q You don't. The fact that it came from the Bonneville Power Administration in the states of Washington and Oregon, would that affect your decision as to whether or not we should make a contribution to the regional activities of energy growth?

A I don't know. I'd have to think about it.

Q You haven't thought about that?

A No.

Q You just want us to live in our own little domain here in Montana and let everybody else go by?

A I feel that we would be better off shipping the coal on trains over railroad tracks to Oregon, or wherever it's going to be shipped, rather than sending it as electricity through the lines.

Q Well, that's a very interesting point, wherever it's going to be shipped. Have you read some testimony, or have you got some data as to whether or not they're going to build a coal generation plant in Oregon or Washington to burn the coal there, and ship the energy back into Montana?

A No, I haven't given you any statistics, and I don't know any statistics, so I can't tell you that.

Q You wouldn't want the Board of Natural Resources to make a decision based upon matters that were speculative and conjectural, would you?

A No. I'm sure there are plenty of people doing lots of research on it, and I feel that's not my job.

Q I think that's true, Mrs. Brunner. The unfortunate thing is, the state of the record doesn't show where this mystic plant is going to be built yet that we're going to ship all this coal to. Do you have any idea?

A No.

MR. PETERSON: That's all I have.

HEARINGS EXAMINER: Do you have anything you wish yo add, Mrs. Brunner?

WITNESS: No.

HEARINGS EXAMINER: Thank you very much. Now, we have Mary Hempleman and Harriet Marble, and I'll call Mrs. Hempleman first so you folks will have a chance to read their statements. They do have written statements.

MARY HEMPLEMAN, appearing as a public witness, having been first duly sworn upon her oath, both as to her written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF MARY HEMPLEMAN WAS DIRECTED TO BE INSERTED AT THIS POINT.)

PRESENTATION OF TESTIMONY ON BEHALF OF

THE LEAGUE OF WOMEN VOTERS OF MONTANA

RELATIVE TO THE PROPOSED DEVELOPMENT OF COLSTRIP UNITS #3 and #4

by Mary Hempleman, President
League of Women Voters of Montana
1200 Avenue B, N.W.
Great Falls, Montana 5940.

My name is Mary Hempleman, and I am the President of the Montana State League of Women Voters. I am testifying on behalf of the League, an organization of approximately 500 members dedicated to informed and active citizen participation in the governmental process.

We wish to compliment the Hearing Officer, Mr. Davis, and the proponents and opponents in this hearing, for the meticulous care and fairness with which this hearing has been conducted. This is the first hearing under the Siting Act and will set a precedent for future hearings; we realize it has lasted so long because everyone involved has been properly concerned with establishing correct procedures for future hearings.

The subject of Colstrip 1 and 2, and then 3 and 4, has been discussed and considered by our members for several years. Some of us (including me) have visited Colstrip. In November of 1974, in response to urging from some of our local leagues (which are located in Billings, Bozeman, Butte, Flathead County, Great Falls, Helena, Liberty County, Missoula, and Ravalli County), the State Board voted to authorize testimony in opposition to construction of Colstrip Units 3 and 4. We are a grass roots organization, where the leadership has neither the desire (nor the ability) to dictate to our members what they shall think, and this decision was challenged by some members of one local league, who instituted a poll of members of the other leagues throughout the state. The results of this poll showed overwhelming support for the State Board action, and overwhelming opposition to proceeding units 3 and 4 [illegible] at this time.

Although we are not an environmental group - this is merely one of the areas of government with which we are concerned - the strongest responses centered on our concerns on air quality, [illegible] particularly important to us in prevention of significant deterioration of existing clean air. Our members question whether any decision can be made as to whether units 3 and 4 can keep pollution within the limits of the Clean Air Act until units 1 and 2 are both operating and have been adequately tested in this location. We also question the meaning of the "conditional certification" from the State Board of Health, feeling that it is unfair to the utilities if they are permitted to build and then not operate if they are unable to meet the standards for clean air, and equally unfair to the public if they are unable to meet these standards but are permitted to operate anyway since they have installed these units at great expense.

Our other major area of concern is that Montana has had a tragic history of "boom and bust" cycles, and we can ill afford another. We have a consensus favoring orderly community growth for Montana, and our members are concerned that the residents of this area will be pushed to provide schools, sanitary facilities, health care, roads - the basic necessities - during the construction period, and that the population will then settle down to a maintenance crew - which will also leave when these facilities become obsolete. We are not convinced that a stable agricultural community is the best location for an industrial development of this type, particularly when other parts of the state which would welcome this industrial development are suffering from unemployment and loss of industry.

You will note that we do not oppose the use of Montana's coal to help allay the current energy crisis, although we feel that conservation of energy is vital and will affect the pattern of future need. We realize that we are not merely citizens of Montana but also citizens of the United States. However, we do feel that Montanans have not merely the right but also the responsibility to see that our valuable natural resources are developed in an orderly manner which will bring lasting benefits to our state.

HEARINGS EXAMINER: Mr. Peterson, you may cross-examine.

EXAMINATION OF MARY HEMPLEMAN

Cross, by Applicants,
By Mr. Peterson:

Q Is it Mrs. Hempleman?

A Yes.

Q Have you been in attendance at the hearings on prior occasions, Mrs. Hempleman?

A Once.

Q And was that for an extended period of time, or just a brief visit?

A It was a very brief visit. My husband came down to attend another hearing and I came along for the ride. I found you a good show.

Q We must have had a lot of excitement that day.

A None, really, but it was interesting to me.

Q What does your husband do?

A He's a chemist.

Q And for whom is he employed?

A General Mills. He's a cereal chemist.

Q Has the League of Women Voters undertaken any study as a result of these hearings as to whether or not there should be procedural corrections to the Utility Siting Act for the purpose of conducting other hearings?

A No, we have not undertaken any study on this. We have been watching them. There are members of the League in Helena who have been watching the proceedings.

Q Has that been for the purpose of trying to propose procedural changes?

A No. It was just that citizens really should pay attention to what the government is doing. The people who are doing right appreciate being noticed. The people who are doing wrong deserve to be noticed.

Q What was the vote that was taken by the League on Colstrip 3 and 4?

A You mean the state board?

Q Yes. No, the poll of the members that you relate to in your statement?

A Oh, the poll of the members. I do not have the figures. Each league reported in the general feeling of their members. I do have some of the letters here.

Q Was it a questionnaire that was sent out to each member?

A No. What it was, was that one league wanted to know how the members of the other leagues felt about the state board action. The ten opinions, which were the best we could do in July at our meeting, agreed that we should stay in the coalition in opposition to Colstrip. This was Billings.

Q Now, let me stop you right there if I may. How many members are there in Billings?

A Right now there are about 60 members. The request went out in -- at the first of June, which is a very bad time. All members were informed that they were to give their opinions.

Q Now, was this an oral opinion to your board of directors?

A It wasn't an oral opinion to the board of directors at all.

The one league asked the other leagues to inform them. I asked the other leagues to let me know also.

Q Oh, I see. So you went through the heirarchy of the League, through the board of directors?

A No, no, no. The other leagues replied to the one league, with a copy to me.

Q Okay. And that is the manner in which you say you instituted a poll of the members?

A I didn't institute. They did, with my consent. I thought it was fine.

Q Oh, sure. What I'm asking is whether or not each individual member had a ballot to cast?

A No. It was not a ballot cast. In fact, it was -- a ballot would say yes or no. These members were permitted to say whatever they wanted to say.

Q How long have you been president?

A Just about two years now.

Q And in how many cities does the League of Women Voters operate?

A We have nine leagues, actually two of them are county leagues. Ravalli County and Flathead County are county leagues.

Q And those leagues are located in Billings, Bozeman, Butte, Flathead, Great Falls, Helena, Liberty County, Missoula, and Ravalli County?

A Yes. Plus some members at large scattered around the state.

Q Do you believe, Mrs. Hempleman, that if the Colstrip units are constructed and operated within the air quality standards of the state of Montana, that this would satisfy your environmental concerns?

A Yes, I think it would.

MR. PETERSON: All right. Thank you very much.

HEARINGS EXAMINER: Thank you very much. Mrs. Marble?

HARRIET MARBLE, appearing as a public witness, having been first duly sworn upon her oath, both as to her written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF HARRIET MARBLE WAS DIRECTED TO BE INSERTED AT THIS POINT.)

LEAGUE OF WOMEN VOTERS OF MONTANA

Statement before the Board of Natural Resources on Colstrip Units Three and Four

March 16, 1976

My name is Harriet Marble of Chester, Montana. As chairman of the League of Women Voters of Montana's Environmental Quality Committee, I am pleased to have this opportunity to appear before this hearing to voice our opposition to construction of Colstrip Power Generating Units Three and Four.

I first visited the Peabody Big Sky Mine, the Western Energy Rosebud Mine and the town of Colstrip in the fall of 1972 on a tour sponsored by the Environmental Quality Council. Since then I have had the opportunity to follow the development of the Colstrip Project both as a League member and as a member of the Environmental Quality Council.

While there are a number of facets of the Colstrip project that the members of the League of Women Voters of Montana find disturbing, I am going to limit my testimony to the impact of air pollution and to air pollution control.

For several decades, the League has actively worked for improvements in our environment. During 1970 and 1971, League members specifically undertook an extensive study of air quality, using best available air pollution information. The purpose of our study of air pollution was to get a substantive understanding for subsequent member action on public policy issues. Our Leagues have acted at all levels of government to ensure that the Clean Air Act of 1970 becomes a truly effective means of cleaning up air as soon as possible or as a means to keep the air clean. We have testified at many air hearings before the Department of Health and Environmental Sciences and a year ago (almost to the day) two of our statements were incorporated in a "addendem to a statement for the League of Women Voters of the United States before the House Instate and Foreign Commerce Subcommittee on Public Health and Environment on bills relating to the Clean Air Act. These statements reflect our attempts to be publicly involved in our fight to demand Montana's air be kept clean.

In 1974, League members were asked their views of possible changes in the Clean Air Act during difficult economic and energy short times. League members said that even under these circumstances any changes should be designed to strengthen and not weaken the Clean Air Act.

The "significant deterioration" provisions of the Clean Air Act are extremely important here today. We believe an area has the right to resist degradation of its air, even if the area is now below state/federal minimum standards. In the Colstrip area if "significant deterioration" is allowed, the clean air and coal create an incentive for industries to locate there so as to avoid the costly pollution control devices. Is it proper to allow installation of pollution sources before clean air areas classification are determined by our state? Is it possible that the power companies are attempting to pollute the air to the maximum with inadequate abatement equipment so that future generating plants can not be built in Colstrip? It appears possible.

We do not feel that proposed air pollution control equipment for Colstrip 3 and 4 approaches either the best-available-control-technology or the state of the art. We demand the best-available-control-technology.

In the 1975 session, the League supported the Montana State Legislative Resolution 58 to uphold to the fullest extent the existing state and federal air pollution control laws and regulations. The Board of Health and Environmental Sciences must have had similar reservations given the fact that they felt compelled to attach conditions to their "conditional certification" for the proposed units. We doubt that at this point any of us really know what the impacts of the air pollution will be. We do know that some witnesses have testified that there will be a loss in crop and range forage yields. Anticipated modification of Northern Great Plains weather by energy production processes will cause significant loss in precipitation according to reports given at the Ft. Union Coal Conference in Bismarck, N.D., which I attended in October, 1975.

We believe that the performance and impact of the air pollution control equipment on Colstrip Units 1 and 2 must be analyzed before we could allow Units 3 and 4 to be built.

In conclusion, it is the position of the League of Women Voters of Montana that Units 3 and 4 should not be built at this time because of "significant deterioration" that will certainly occur and failure to provide best-available-control-technology.

HEARINGS EXAMINER: We have her written statement so you may cross-examine, Mr. Peterson.

EXAMINATION OF HARRIET MARBLE

Cross, by Applicants,

By Mr. Peterson:

Q You're Harriet Marble of Chester, Montana?

A Correct.

Q How long have you lived at Chester?

A Four years.

Q Are you from Montana originally?

A No, I am not.

Q From where did you move?

A Well, I went to school here, so that was my first experience in Montana. I've been here approximately 12 years.

Q I see. What school did you attend in Montana?

A University of Montana.

Q And did you achieve a degree there?

A I got a master's degree in wildlife management.

Q Are you actively pursuing that education now?

A No.

Q Housewife?

A Yes.

Q What does your husband do?

A He is an attorney.

Q Now, I believe you had some connection with the Environmental Quality Council for the state of Montana?

A That is correct.

Q And may I also assume that in that connection you've had an opportunity to review the air pollution standards which are in effect in the state of Montana, and which govern the operation of any fossil fuel plant?

A Well, not through the Environmental Quality Council I haven't, but I have been fully aware of them through the League of Women Voters.

Q Okay. You've made yourself aware of those standards through the League?

A Yes.

Q And you understand, do you not, Mrs. Marble, that the ambient air quality standards which are in effect in Montana, both federal and state, have been enacted for the purpose of protecting public health and welfare?

A Indeed I do.

Q And that the standards that are presently in effect by law, had to be set with an adequate margin of safety to protect that public health and welfare?

A Yes, I agree, based on data they have had, but I feel that from other readings I have made recently, particularly with sulfur oxides, there have been hearings in Washington saying that possibly they are being set too low, they should be higher, because they do affect the health and welfare of the environment.

Q And that's the sulfate hearings that have been going on in Washington by the EPA?

A This was a -- I wish I had the report with me. I do not, but it came out of a subcommittee in Congress, and it's completed, and it's --

Q The Muskie subcommittee?

A Yes. And it was quite a thick volume.

Q Right. And they were there questioning whether or not the federal ambient air standards were still sufficient to protect public health?

A That's what I got from it, yes.

Q And you understand, do you not, that the federal standard is higher, federal annual standard, which is set at 80 micrograms per cubic meter, is higher than the Montana standard? The Montana standard is more stringent?

A Yes, I do understand that.

Q And the Montana standard is 52 micrograms per cubic meter on an annual mean.

A I'll have to accept your figures. I forget figures.

Q All right, do that. That's what it is.

A Okay.

Q And so that if the federal standard was somewhat high in accordance to what you were able to learn, then, of course, you would have to admit, wouldn't you, that more stringent Montana standards would do the job?

A Not necessarily.

Q Not necessarily. Your complaint here, then, is that the Montana standards are not sufficient to protect the public health and welfare?

A I personally feel that, but this isn't the right place to argue that. That's before the Board of Health and Environmental Sciences I feel that has to be discussed.

Q What are the significant deterioration standards which are applicable to the Colstrip units 3 and 4?

A Well, I think it has to do with the trace metals as well as the sulfur oxides. They're something that has to be evaluated.

Q It's your position that, as far as significant deterioration is concerned, that any degradation of the air constitutes a violation of significant deterioration?

A I guess I'd go that far.

Q Okay. Do you realize what the impact of that position would be on the construction of anything in the state of Montana?

A Well, I feel that there are areas in Montana where it could be built that does not have the pristine air already that the Colstrip area provides.

Q But if you raise the level of deterioration, or the level of pollution in any area of the state above what the base line is today, would that not degradate the air that is presently in existence?

A Definitely. That's why our group is for the best possible technology to correct this.

Q Have you made a study of the air pollution control system which is proposed for Colstrip units 3 and 4?

A I have read about it. I am not a scientist in this area, and I can't speak as a scientist, but I'm fully aware that from my readings, I found that there are better technologies available to remove sulfur oxides.

Q What are they?

A Well, the lime is supposed to be better than the ash, which I think is the one presently proposed for the 3 and 4.

Q Do you understand the proposal of the air pollution control system for units 3 and 4 to include a fly ash-lime injection system for the purpose of removing sulfur dioxide?

A I didn't know it was dash lime.

Q Have you ever been down to the units 1 or 2 recently?

A I haven't been recently.

Q You then haven't seen the large lime silos that are sitting adjacent to the air pollution control system from which lime is slurried into the absorber units in order to reduce the SO_2 output?

A No. I just read what the removal is supposed to be, not percentage removal.

Q What is your definition of best available control technology?

A That which has already been found to be available that works. In this particular case, removal of sulfur oxides.

Q Do you know of any legal definition of that term?

A I guess I do not. I know the state of the art is that which is possible, I mean theoretically possible, but has not been commercially, economically been proven. Well, the other has to do with economics as well.

Q You do admit that not only does the system have to perform, that is, be available for use, but that it also must represent a wise economic investment?

A Yes, indeed I do. That's right.

Q Do you subscribe to the viewpoint that as a customer of the Montana Power, that they must undertake to have its utility invest in air pollution control equipment, and that this must be a cost that the consumer has to undertake in order to protect the environment?

A Fully, and the League of Women Voters believes in paying the cost that it takes to clean up the environment.

Q Do you know what the cost of the air pollution control system is projected for 3 and 4?

A I've read it but I've forgotten.

Q I would suggest $151,000,000.00 to you as the projected cost figure for the air pollution control system only, and this is a cost which the consumer must bear. Would that indicate to you that the best available control technology is, in fact, being installed in Colstrip, considering the removal efficiencies and the economics?

A I cannot answer that.

MR. PETERSON: Thank you very much.

HEARINGS EXAMINER: Thank you. Mr. Rittel? We'll take one more. He has a short statement. You have a copy of his statement, Mr. Peterson, headed Black Tail Ranch.

TAG RITTEL, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF TAG RITTEL WAS DIRECTED TO BE INSERTED AT THIS POINT.)

BLACK TAIL RANCH

TAG & LYLA RITTEL
Wolf Creek, Montana 59648
Phone: 406-235-4350

RANCH VACATIONS . MUSEUM . CAVERN . PACK TRIPS . HUNTING

[illegible], 19[illegible]

Mr. Chairman,

I am a Outfitter and Livestock grower and I'm against Coalstrip #3 and #4. I think that it is about time we considered the future. We are leting our coal being dug up and used by outside interests, when this very coal could keep the population of Montana from the raw element in the future. We have one state that has very cold winters, coal produces, heat for cooking and heat for all those winter homes. What coal we have will be used up in just five to seven years with Coalstrip 3 and 4. This same amount of coal could last our population for 25 years.

Sincerely,

Tag Rittel

LICENSED OUTFITTER & GUIDE
MONTANA OUTFITTERS AND DUDE RANCHERS

HEARINGS EXAMINER: Mr. Rittel, you've filed a statement in opposition to the proposed facilities. Do you have anything you wish to add to that prior to the time Mr. Peterson asks you questions?

WITNESS: No, I don't.

EXAMINATION OF TAG RITTEL

Cross, by Applicants,

By Mr. Peterson:

Q Mr. Rittel, I just have a couple of questions. As I understand your statement, in which you state that what coal we have will be used up in just 5 to 7 years with Colstrip units 3 and 4, and that the same amount of coal could last our population for 25 years, is what you're stating there is that what we're going to burn at Colstrip 3 and 4, will use up what's available in the Fort Union Basin?

A That's what I believe that you will, yes.

MR. PETERSON: I see. Okay, that's all, Mr. Rittel. Thank you very much.

HEARINGS EXAMINER: Thank you very much, sir. Your testimony will go to the board along with the other. Mr. Meloy?

MR. MELOY: Mr. Davis, the Northern Cheyenne Tribe had four witnesses which it had not completed when we recessed the tribe's case-in-chief. They were John Woodenlegs, Ted Risingsun, Rudolph King, Sr., and Sam Americanhorse. Mr. Americanhorse and Mr. Risingsun will not be testifying. Today the tribe would like to complete its case by presenting Mr. Woodenlegs and Mr. Rudolph King, Sr. The testimony of Mr. King and Mr. Woodenlegs has been described in the statement that I served on parties several weeks ago. The tribe would call Mr. Woodenlegs first.

HEARINGS EXAMINER: Very well. Mr. Woodenlegs?

JOHN WOODENLEGS, called as a witness by the Northern Cheyenne Tribe, Inc., having been first duly sworn upon his oath, was examined and testified as follows:

MR. BELLINGHAM: Excuse me, Mr. Woodenlegs, if you would, just a second. At this time, applicants object to any testimony of John Woodenlegs on the grounds that no statement has previously been served upon us, and the descriptive statement previously served upon us, was served approximately two weeks ago, long subsequent to the January 10, 1976 date set forth in the Hearing Examiner's order of December 10, 1975.

HEARINGS EXAMINER: Objection's overruled. You may proceed now, Mr. Woodenlegs.

EXAMINATION OF JOHN WOODENLEGS

Direct, by Northern Cheyenne Tribe, Inc.,

By Mr. Meloy:

Q Mr.Woodenlegs, would you tell the board, are you a Cheyenne?

A Yes.

Q A full-blooded Cheyenne?

A Yes.

Q How long have you lived on the reservation?

A Most of my life. All my life.

Q Your ancestors lived on the reservation?

A Yes.

Q Could you tell the board about your grandmother and grandfather?

A My grandfather's Richard Woodenlegs and my father's Thomas Woodenlegs and my grandmother is Daisy Woodenlegs. My grandfather Woodenlegs was 18 years old when he fought in the Custer battle. And later after the battle they were taken to Oklahoma by the government. Somehow like they wanted to destroy the Cheyenne and Sioux, get rid of them, or get them out of Montana. Then they took them to Oklahoma. Two or three years down there, they wanted to come back to Montana, and they asked the government. They said no, you stay down there. But they finally broke and were taken back several times, and maybe the fourth time he got away. Part of them stayed in Oklahoma, and part of them wanted to go back to Montana. They know it's cold, freezing up there, but they like it, I guess. The mountains, and the place where maybe the spirit put them, they liked Montana. They, by daytime, they went in the holes, and lived with snakes, rattlesnakes and different -- but during the night they traveled back to Montana. About 125 got back. They walked back most of the way. They find a horse here and there. And this is where they lived. They wanted to stay in Montana so they soldiered; they joined the Army, just to have the reservation. Now, they had this reservation there. We liked Montana. It's where we always lived. We were given this land here of 445,000 acres, under executive order. It was given to us a couple of times when we lived there before. This is where we are now.

Q Was your grandmother one of the people who walked back from Oklahoma.

A Yes, my grandmother walked back.

Q Are you a member of the tribal council?

A Yes, I'm a member of the council now.

Q Did you serve with the council before that time?

A Yes, I served as the vice president as a young man. Then I served two years.

Q As a vice president?

A As a vice president. Then I was elected as a councilman later, then became a vice president, and then president of the council.

Q How long did you serve as president of the Cheyenne tribal council?

A Fourteen years.

Q Fourteen years?

A Fourteen-fifteen years.

Q Would you tell the board who Sweet Medicine is? What it is?

A Sweet Medicine would be kind of a prophet that came to some Cheyenne woman and asked the woman to be his grandmother. The grandmother thought he was just lost and raised the boy as an Indian boy and it was spiritual. He growed up and he taught a lot of the good ways of the Cheyenne people. He taught and he prophesied different things as he growed up to be a young man. And he showed how to be the chiefs in the societies, different societies, and how to get along, how to work together. And he showed them how to worship to God, the spirit, and these were ways. It was not a religion, only a way of life to God. And this is the way they decided things, asked for spiritual guidance. And this prophet here taught them a lot of good ways. And these societies they have the chiefs, the 44 chiefs, and also the different societies, like the elk society, and the fox society, the dog society. These were the kind of -- the chiefs were the leaders, and these differed, like the welfare would be the elks, the law and order would be the fox, the military would be the dog society. These were taught by this man, this spiritual person-like prophet.

Q Did he prophesy something?

A Later as he was going, he told the Cheyenne people that there would be people coming and they would have a lot of hair on their face, that these people they were smart and would be fast. And he tried to tell them that they would kind of take over things and try to remember what I have taught you. Try to hold those ways, some of these good ways. These people would be coming and tell you different things and have different things and you going to kind of forget your way of life, your way of life and the good things that I have taught you. The Cheyenne people, they didn't marry until they were older, and then one or two children. They had good control. They must of had good controls. They did not believe in killing anyone. If somebody committed a crime, he was just kicked out of the tribe,so that somebody else'd kill him. And they didn't believe in killing or hanging or destroying one another, or destroying earth, the plants and things. They were taught even to ask for these things, ask God for these things, the creator. He said that these people that will come will give you some things, and maybe you should not take them, maybe they might harm you, they might destroy your way of life. They will bring a -- maybe have a horse, you can use this horse; maybe they'll bring their own cattle; and then your buffalo will disappear. And they did not marry in close to relatives, and he said you'll be marrying your own relatives. You'll get so you're gonna forget your directions, what I have taught you. You're going to end up maybe worser than crazy.

Q Would you briefly tell about the beginnings of the Cheyenne in Montana?

A In our account of the history, the Cheyenne people lived close to Superior Lake, north of Superior Lake. They were fishermen, fishermen and small game hunters. They were Cheyenne people, Cheyenne and Sitaia, that's the two. They were together. They had their ways and they moved westland, close to the rivers, and they became farmers like. They planted gardens, but they still were Cheyenne people, native people. They still moved west, they come to Dakota's and Montana. They got ahold of a horse; they became buffalo hunters; they used that buffalo for their teepees and for their survival, their livelihood. Now, they changed to these three ways without somebody else telling them. Only spiritual guidance helped them, helped them this way. And they stayed this color; they didn't change, and they figure this color, this dirt color, we belonged to earth. Now, the fourth one is the coming of the white man, the fourth change that we had to make. We having a hard time, we kind of struggling with it.

Q You mentioned, while pointing to your hand, that the Cheyenne would stay the color of the earth. Would you explain the importance of the earth and the land to the tribe?

A As I said, they asked for spiritual guidance. On anything that they couldn't decide, they always had a prayer; prayer was the first, to ask for guidance. If they gonna hunt the buffalo, or antelope, they always prayed first, asked for the permission to have these things. And even the water. The water was good and I was told as a young person not to pee in the river, creek, spring; you would pollute that; you would spoil it; it is gonna take you; you gonna drown. I was afraid of water. No good to it, only to use it. And it was not to pollute it, that was all. Tell the children not to pee in it, not to throw no-good stuff in it, not to destroy it or do no good to it. And also the earth. We were not to damage it in any way because it growed things, grass for the buffalo, for the animals, and the trees. When my Cheyenne people first were put on that reservation, and the government brought plow and horse to plow up and turn the ground over, and stir it up, the Cheyenne don't want to do that. But the government says, you try, you plow. One

Indian have braids on, he gonna plow, hook up his team and all, and farmers and different ones and all watching him plowing down the field. As he turned over the soil, he plowed up bull snakes, so he quit and said, I don't want to do that. So another man says, I'll try. So he plowed some more and he plowed up two rattlesnakes, so then they all quit. We might plow up something and it really take after us. We don't want to do that. Very sacred. They have the sweat teepees. The white people have a kind of a turkish bath, but these Indians have a sweat bath, have willows and they cover this. And they even ask for the rocks and for the wood and the water to use in there. They pray first to use this.

Q They asked permission to use that?

A Permission. Permission to use the different things. Like they have this antelope hunt. Antelope is a fast runner we say. My Cheyenne people chase those on foot. They relayed on them. But, they had worship service a day before or two days before, asking permission, asking God for these things, that they hungry. They gonna use them; they not just hunting for sport. They run them over a kind of a place where they run them into. They relay on them, holding a bustion on one side, and one side is holding a pipe. If they run too far this way, they just hold it out, even if they're quite a ways ahead, they turn. But they have one man back to camp praying, asking God to help the runners, and when they get those, they use wood and rock, stones, to kill them. And they bring them outside to butcher them, and face them east.

And they get the liver and the kidney and bring it back to the one that's praying over at the camp, that they got the antelope, and he thanks God for that, that they got it.

Q The proceeding that we are involved in here is to determine whether two generation stations should be built at Colstrip and the purpose of the hearing is for the state of Montana to determine whether the units should be built. What do you see might happen, in your opinion, to the way of life, to the tradition that you have described to us, from the construction and operation of those plants?

A Being put on reservation, kind of locked in there, we were not to go off the reservation without a permit, and the non-Indian or anybody else coming on the reservation had to have a permit. We're kind of locked in there, a tall wire fence around us. Now, a lot of these good Cheyenne ways were mixed up and broken down. We had to live a broken down way of life for a long time. Some of these useful and working for the Cheyenne people, those things that we used are not very strong any more. Many of my people seem to concern about themselves, see what they can get for themselves. They've been conditioned different ways, to see what they can get. The idea of coal development and getting lots of money seems to be attractive, the money. So, this is the whole business of coal development, kind of complex. It is hard for us to know what could be done. No one should kind of pressure us. I know that Custer, he tried to pressure us. He didn't quite make it. We need time to learn, to know, and get some good, honest information. So, if uncontrolled development comes, we will surely be, you know, they will run us. We already have many problems, being locked up and having broken many of our ways, so nobody seems to care. We're really trying to kind of come out of that. They might have money; money might intensify some of our problems, but it would not help all the way. We have problems on the reservation there, and we thought employment and all this would help. Some of those problems are still there. We have employment, some employment. We have learned from that. So our people already struggling, kind of a painful process of adjusting to the impact of the dominant culture. We have problems on that. Now today we are concerned about our own children's education, and where some of the communities are kind of taking over schools, and we're not on the school board. The non-Indian or the government was on the school board, told us what to do, or kidnap our children to go away to school, and now we're kind of taking over, and we're using some of our ways that we can still use, and our language and our way of life was no good. We were told that. Now today it's put back in schools, learn the language and learn your ways. It's put back in school. So now we are really relearning parts of our culture and our good life. There's a lot that we can still use. So, a large number of non-Indian come to live with us with this coal, I think it would kind of run over us again, run us out. So these people, they don't care about our culture, about our ways, our traditions. The Cheyenne people fought hard to be allowed to live in Montana. Our whole history has been a struggle for survival.

Uncontrolled coal development could kind of finish us off, I think. But we have built back up. I think my Cheyenne people, they kind of tough for some reason.

Q Is that complete?

A Yeah.

MR. MELOY: Mr. Davis, I have no further questions.

HEARINGS EXAMINER: Very well, Mr. Bellingham, do you have any cross-examination?

Cross, by Applicants,

By Mr. Bellingham:

Q Mr. Woodenlegs, I have just a few questions. I assume, then, that you oppose all coal development on the reservation, the Northern Cheyenne reservation; don't you, at this time?

A Right at this time. I just got through saying we'd like to learn, to know.

Q You'd like to wait a while?

A Yes.

Q How long do you think that might take, John?

A I couldn't say.

Q Quite a few years?

A It's just been recently that we took over to be on the school board, and we're just getting into that education, and now we're using both parts now, with our native way of life that we can still use, and still get an education.

Q John, what about coal development off the reservation? That is, elsewhere in Rosebud County, for example, do you oppose that also?

A We like to learn more about that, too, about what's going to come out of that. We live just south of a place where they're digging coal, just a little ways. Is that going to affect our grass, our land, our water, or our cattle, our stock? We don't know. We'd like to learn.

Q Well then, John, I take it that you do oppose coal development off the reservation, too, then, don't you?

A We'd like to know. We'd like to know what's the good part of it, what's the bad part of it.

Q Well, you know that strip mining has been going on now for some time, off the reservation?

A Yeah.

Q And a lot of that coal is going back to the middle east, is it not? You know that? The middle west I should say.

A You have the plants there. Before they mined, they didn't have those.

Q Well, some of the coal that's being mined now is going to the middle west states such as Illinois and Wisconsin and those states; are you aware of that, John?

A They don't have no coal, huh?

Q Yeah. So they're shipping it from Colstrip and other places in Rosebud County; did you know that, that they'd been doing that for some years?

A Yeah, and the places they're shipping it, they don't have coal.

Q Yes, that's right. You bet.

A They don't have any, or they mined it out, or something.

Q Well, you know that the coal that's being used for Colstrip

1 and that will be used for Colstrip 2, does not come from the reservation, does it?

A No.

Q And the coal that will be used for 3 and 4, if 3 and 4 are approved, will not come from the reservation; you're aware of that, too, aren't you?

A Yes. What is coming out of these plants? We live just south of these places.

Q Your reservation is about 20 miles away? Is it something like that?

A Yes.

Q From Colstrip itself, I think, isn't it?

A Yes.

MR. BELLINGHAM: I have no further questions.

HEARINGS EXAMINER: Mr. Meloy, do you have anything further?

MR. MELOY: No redirect.

HEARINGS EXAMINER: Thank you very much, Mr. Woodenlegs, and you're excused. You can call your next witness, Mr. Meloy.

MR. MELOY: The Tribe would call Rudolph King, Sr.

RUDOLPH KING, Sr., called as a witness by the Northern Cheyenne Tribe, Inc., having been first duly sworn upon his oath, was examined and testified as follows:

MR. BELLINGHAM: Sir, before you testify, I would like to make the same objection that I heretofore made in the case of John Woodenlegs, and appreciate a continuing objection as far as Mr. King's testimony is concerned.

HEARINGS EXAMINER: Very well. The record will show you have the same objection because of failure of service to comply with the Hearings Examiner's order and the objection will be overruled and you may proceed.

EXAMINATION OF RUDOLPH KING, SR.

Direct, by Northern Cheyenne Tribe, Inc.,
By Mr. Meloy:

Q Mr. King, are you a member of the Northern Cheyenne tribal council?

A Yes, I am.

Q And how are you presently employed?

A I'm a director of Inter-Tribal Alcoholism Treatment Center in Sheridan, Wyoming.

Q And what does that program treat, and what do they -- what is the function of that program? Would you explain what that program does?

A The tribal treatment center was set up by four tribes, mainly the Northern Cheyenne Tribe, the Crow, Shoshone, and Arapahoe tribes from Wyoming. It was set up to take care of 20 people, alcoholics. It's an Indian treatment center staffed by Indians. Right now we take in 38 men and 12 women. We have an educational program involved in this center which has to do with GED, business skills, and welding. We are trying to pick up the dropouts from high school, some of the kids that were, you might say, they saw this strip mining taking place and plants being built down at Colstrip, they dropped out of school thinking that they could be making a lot of money. But eventually they were employed maybe for a month before they were either canned or laid off because of they were five or ten minutes late. Now we're working these people at the center and out of 15 kids that have started on this GED, 8 have graduated. They have gotten their GED's and have gone back to their reservations. Some have gone back to some trade school, and some are trying to go back to college.

Q The people who come to your program are -- have alcoholic problems; is that right?

A Yes.

Q And those people who worked at units 1 and 2 who came to your program came because they had an alcohol problem?

A That's right.

Q Is that related somehow to the fact that during the time they were working they had some money, and would you explain how they got from the point where they were canned to the alcohol treatment center?

A Well, there's a place called Jimtown. It's right off the reservation towards Colstrip, and naturally some of them stopped by and picked up a bottle to take with them to work and sometimes they overdo it, they maybe stop on the road and have a few drinks, and by this, they just been either fired or just laid off with no explanation.

Q And how would they get then to the alcoholic treatment program?

A Well, we have alcoholism programs on just about every reservation in the country, and we have a field representative that represents our center that's working in the Lame Deer area on the Cheyenne reservation, and these people, when they make it into jail, he goes down there and talks to them. From there they go to a detox center for five days. Then after they do their five days at detox, well, then they go to this halfway house prior to coming to the center, if we have room. If we don't have a room, they're put on a waiting list.

Q In working with alcoholics and their problems, have you had any experience or noted any increase in drug problems on the reservations?

A Yes, we've had some people referred to our center that were using drugs and we're not equipped to deal with people that are on drugs, so there is a training center established in Billings. It's called Morning Star Training Center. This is where we refer these people.

Q These are Northern Cheyenne people?

A Not only Cheyenne people, but others that -- there's quite a few different tribes working at Colstrip and our married on our reservation. We get them, too.

Q You, before you became director of the alcoholism program, were a juvenile judge; is that right?

A Yes, I was a tribal judge for the Northern Cheyenne tribe for seven years.

Q For seven years?

A Yes.

Q Have you experienced any problems, delinquency problems, which resulted from either young Cheyennes working at Colstrip or non-Indians who may have contributed to the delinquency problems who were working at Colstrip?

A Well, before the units 1 and 2 were built, this coal strip mining just got under way at Colstrip, and we do have some of our Cheyenne youth attending Colstrip High School down there. Since this strip mining and these units 1 and 2 have been built, well, it seems like juvenile delinquency has gone up, being that some of them are making more money than they were before, so they gone to using drugs, and this has caused break-ins in homes, just like here last week, there was a break-in at our clinic at Lame Deer, at the Northern Cheyenne Agency, and the next day they saw this one kid jumping up and down in the tribal office trying to fight everybody. They didn't know whether he was drunk or doped up or whatever. He was arrested by the police, taken to the jail. About 15 minutes after he was put in a drunk tank, they were watching him and they just turned around to get some coffee and they went back and the guy had already hung himself in the cell. This is happening on our reservation due to some of our people making more money, and these kids are getting more of this money from their parents, so they go down and buy booze, or they can't get booze -- we have some kids that are attending college -- I think we have about 178 kids in college now, and these people are being exposed to drugs, and naturally, once they come back to the reservation, well they know where the stuff's coming from.

Q If a felony is committed on the reservation, who prosecutes that case?

A We have our tribal police. They have a ten man force, and then we have a special officer, which is a Cheyenne Indian, and when a felony takes place, he, in turn, calls the FBI out of Billings, and the FBI comes out, investigates the case and right there he determines -- if he thinks it's not a felony case, well they refer it back to the tribal court. If he thinks that it is, well then they go to the U.S. Attorney in Billings. I think the last year I was a tribal judge, there was 129 cases declined because of supposedly not enough evidence. Then if the U.S. Attorney doesn't decline the cases, it goes to the grand jury. The grand jury in turn throws them out. Just like a case there between Lame Deer and Busby. We don't know whether it was a straight booze party, or if there was drugs involved, but there was a Navajo boy that was married to one of our Cheyenne girls, and he was killed at this party. This was referred to the U.S. Attorney in Billings, and, in turn, he referred it to the grand jury, who, in turn, declined the case because they said it was a drunken brawl. There was a lot of people drunk there. And I got on the phone and I talked to this U.S. Attorney, and I said, how come this case was thrown out? There was one life taken. It was an Indian. And yet, you people threw this case out, so at least somebody should have spent one night in jail. And this is happening on the reservation.

Q In other words, the U.S. Attorney in Billings makes a decision on felony cases as to whether to prosecute or not?

A That's right.

Q The tribe has no sayso over that?

A No. When we question that, they tell us that it has to do with this coal situation, that the U.S. Supreme Court is supposed to make some kind of ruling, and I don't think that's right, because we're losing Indians right and left because of drugs and alcohol. We had four girls raped by one man one night, and this was declined, and this guy is still running loose because of --

Q The president of the council, Mr. Rowland, testified that an ordinance had been passed by the tribal council which gave the tribe jurisdiction over non-whites who committed crimes on the reservation. Do you recall that resolution?

A Yes. It was passed in November and then okayed in Washington in January of this year, and up to now there've been six non-Indians arrested on the reservation, and I believe there was one female that was charged with assault, and then there was two for breach of the peace, two assault, one DWI, and one possession of dangerous drugs.

MR. BELLINGHAM: Excuse me, I think you said non-whites.

MR. MELOY: I meant non-Indians.

Q Those numbers that you just read me were arrests of non-Indians on the reservation since the commissioner approved the resolution in January; is that correct?

A That's right.

MR. MELOY: I have no other questions of Mr. King.

HEARINGS EXAMINER: Mr. Bellingham?

Cross, by Applicants,
By Mr. Bellingham:

Q I have just a few questions, Mr. King. I think you indicated that some of the Cheyenne Indians that worked at Colstrip on units 1 and 2 had money and, as a result, used it for drugs, apparently, as well as for booze; is that right?

A Right.

Q Well now, we've had witnesses in here testify on behalf of the Cheyenne Tribe to the effect that they were quite critical because more Cheyennes were not employed at Colstrip. I would assume, then, if more Cheyennes had been employed at Colstrip, there would have been more problems as far as drunkenness and drugs is concerned, with those people that were employed at Colstrip that aren't now?

A When it comes to employment down at Colstrip, I would go along with 3 and 4 right away, I suppose, as far as money's concerned, but I've gone this far, lived this far without a lot of money. I've gotten by by having jobs. And at Colstrip, it seems to me like the Indians that are employed down there -- I think there's about 6 right now -- the most that were employed down there was about 20, and then these were labor jobs. They're not connected with any of the supervisory jobs or handling the heavy equipment, or whatever.

Q Well, is it your approach then, that you don't believe that Colstrip should employ any Northern Cheyenne Indians on the job down there?

A No. I'm saying that we have an Indian Action Program right in Lame Deer. They train Indian youth to handle heavy equipment such as dozers and this and that that has to do with strip mining, but yet they're not hired, and they have the training. They're certified, and I think they're working through Miles City Community College. They're certified when they finish the course, and yet they're overlooked. I'm not saying that they shouldn't. I'm saying that as long as they're qualified, I don't see why they're not given the same chance as anybody else that has the --

Q Mr. Walden's testimony -- you know who Mr. Walden is, do you not?

A No, I don't.

Q He's the field superintendent for Bechtel down on the job, and part Indian himself, and he's testified that there's been a great many more Indians, and in particular, Northern Cheyenne, that's worked down at Colstrip than you indicated. And also, he's testified that there was a welder school set up down there, the Northern Cheyenne attended that, and these people were employed as welders. Were you aware of that fact?

A They have all this, yes, but I wish he'd go down there and just check on how many Cheyennes are working there. There's only about 6 right now, and there haven't been over 20. There's been other tribes; maybe he's using that.

Q No, he's indicated that there's more, but that's a question that I think the record will show. You don't feel, then, that they should not employ Northern Cheyenne because this might lead to further drug and alcoholic abuses?

A No. I'm saying I think they should give the qualified Indians a chance to work if they're going to have that. There's no way we can stop drugs or alcoholism anyway.

Q You mentioned Jimtown. That's been there a long time, has it not, Mr. King?

A Yes, it has.

Q That's been there prior to the strip mining and prior to units 1 and 2, hasn't it?

A That's right.

Q And there's been alcoholism connected with Jimtown for many years, hasn't there?

A There has.

Q And there's been alcoholism as far as the Northern Cheyenne Tribe is concerned for many years prior to the time that 1 and 2 came on; isn't that right?

A Well, there was alcoholism, but I think maybe John could tell you the same thing, when I was a young kid, an Indian that would drink was sort of an outcast. He wasn't wanted in his community because of his drinking, because once he come around he would raise hell and try to fight everybody that's not. But in the last five years or so, it's come to the point that this alcoholism has been accepted now and even our tribal council has finally realized that alcoholism is a disease and is treatable. They're trying to do something about it now.

Q This has been going on for many years, hasn't it?

A Yes.

Q And of course, this is true also of the white man. They've had problems with alcoholism for many years; isn't that right?

A That's right.

Q You mentioned Indians that go away to school, to college, and pick up drug habits and bring them back, and so forth. Now, Colstrip units 1 and 2 had no effect on that, did they?

A The college kids are telling the kids on the reservation, and in turn, we know that it's coming out of Colstrip, because that's where all the money is, and our high school kids, St. Labre, Busby High School, the grade school in Lame Deer, the surrounding areas, they're all hanging out in Colstrip.

Q Well, but when the kids go away to college, they have no contact with units 1 and 2 when they're away at school, do they?

A Well, they're there during the summers, and most of them are going to school at Miles City. They come through Colstrip when they come home, and naturally they, in turn, push the drugs off to the younger Indian kids on the streets.

Q Well, they've learned this away at school, the drug habit?

A I would think so.

Q Yes. And this is true of white people, white youth, too, these days. We've had a rapid increase in drug problems over the past 10 years or so, haven't we, among the whites throughout the country?

A Yes.

Q So it isn't restricted at all to the reservation at all, is it, it's sort of epidemic proportions throughout the United States in the last 10 years or so?

A Well, our youth at first were hesitant in using drugs because if they got caught, they got busted, so they were sticking to wine, but now they're making more money, some of them are dropping out of high school, like I stated before, and they get the labor jobs down at Colstrip and they work a while. If they miss half a day or fifteen minutes, they're canned, and so this is where all the --

Q Do you think they're discriminating against the Cheyenne youth on the job?

A I would think so.

Q You do?

A Because they use the excuse of they're not skilled, and this is why we have these Indian Action Programs in Lame Deer. They're teaching them just about everything that they need to get a job at Colstrip, and yet they're overlooked because they're not skilled, and yet they have these. I think we have some of the best cat operators on the reservation, but they can't use their knowledge.

Q Then you feel that the Northern Cheyenne are being discriminated against by Bechtel and the people that are constructing the units?

A Yes.

MR. BELLINGHAM: No further questions.

Redirect, by Northern Cheyenne Tribe, Inc.,

By Mr. Meloy:

Q Just a few questions on redirect. Mr. King, Mr. Bellingham asked you whether you thought it wasn't good for Cheyennes to have jobs because that increased the alcohol and drug problems. Do you think that the fact that those jobs available are short-term jobs, has anything to do with your opinion about whether it's good for Cheyennes to have those jobs, as it relates to alcoholism problems?

A Well, I don't really know how to answer it.

Q Well, I'll restate the question. Do you know of any long-term jobs available at units 1 and 2 that Cheyennes started to hold and are still holding and will continue to hold in the future?

A I don't know of any. I have a nephew that's worked down there as a laborer and I think he's been canned about three times already, and I guess just the idea he's a good worker, his foreman kind of likes him, he takes him back, and I understand he's been given last chance, and that's it.

Q Well, if the jobs available at Colstrip from units 1 and 2, or units 3 and 4, were long-term jobs, in which the employee had some job security, do you think that the income that he made would, in that case, contribute to alcohol problems?

A Yes, it would.

Q Oh, you think it would?

A No, no.

Q And the fact that these jobs are just short-term jobs where the employee might get a large amount of money over a short period of time, does that kind of a job lend itself to alcoholism problems?

A Yes. Some of them have turned to bootlegging. They're making good money for short time, and they know that they're going to be laid off, so the money that they made, in turn, they go to a liquor store, like, say, after two o'clock the bars are closed, well, if you're a heavy drinker and don't mind paying money, well, that's where you'd pay $17.00 for a half a gallon, and just about everybody that's worked down there for a short term right now are driving almost new cars because of their bootlegging.

Q Well, further, Mr. Bellingham asked you about the fact that college students might go away to college and learn drug habits and that, he was suggesting to you, was a common problem in this country. Why is it that -- and you answered, and part of your answer you said, they go to Colstrip because that's where the money is. Isn't that also where the drugs are?

A Yes.

Q And if the development which provided the money was not there, would you expect the drug problem to be, as far as the Northern Cheyenne are concerned, a significant one? A bad one?

A No.

MR. MELOY: I have no other questions, Mr. Davis.

HEARINGS EXAMINER: Anything further, Mr. Bellingham?

Re-cross, by Applicants,

By Mr. Bellingham:

Q Mr. King, you know who Allen Rowland is, do you not?

A Yes.

Q He's president of the Northern Cheyenne Tribal Council. He testified that from that time on -- he was talking about 1900 -- the Northern Cheyenne Tribe has continued to exist, dwelling like most other American Indians in poverty, plagued with sickness, by clinging to his piece of land obtained by our ancestors at such a terrible cost. Do you agree with that statement?

A Yes.

Q So you've had poverty, you've had sickness, you've had problems for many years in the past, have you not? And I'm talking about the Northern Cheyenne?

A Yes.

MR. BELLINGHAM: No further questions.

Re-redirect, by Northern Cheyenne Tribe, Inc.,
By Mr. Meloy:

Q Are you concerned about the exaggeration of those problems that construction of units 1 and 2, and possibly 3 and 4, might have on your existing problems?

A Yes.

MR. MELOY: I have no other questions, Mr. Davis.

HEARINGS EXAMINER: Thank you very much, sir, and you're excused.

MR. MELOY: Mr. Davis, Mr. King came up here today with two other people who live on the reservation who would like to testify at this time as public witnesses, and I would appreciate, since the record will read a little more smoothly if we could put those folks on at this time.

HEARINGS EXAMINER: Well, I think what I would like to do, if they want to appear as public witnesses, in view of the rulings we've made in this proceeding, they'll have to appear as non-scheduled witnesses on behalf of your case-in-chief, so if you've concluded with the witnesses that you've scheduled, and rest your case-in- chief, then I intend to call them next as public witnesses.

MR. MELOY: Yes, we rest at this time, Mr. Davis.

HEARINGS EXAMINER: Very well. I'll call Mr. Littlebird who doesn't have a written statement, and after that I'll call Dick Lafever, who does have a written statement. So, Mr. Littlebird, are you ready?

VANCE LITTLEBIRD, appearing as a public witness, having been first duly sworn upon his oath, was examined and testified as follows:

HEARINGS EXAMINER: If you'd give the reporter your name and address for the spelling of it?

ORAL STATEMENT OF VANCE LITTLEBIRD

I am Vance Littlebird. I live at Lame Deer.

I'd like to start off by going into my past a little bit. I went through Job Corps for training. I was 16. Then I came back to the reservation and I just kind of floated around different jobs. A program opened up for the people on the reservation to get jobs at plants 1 and 2, I guess it is. I was one of the first ones to get into the job. I applied and they said I would get it. So, I started working for plants 1 and 2. It was working out okay as far as -- I had put in a lot -- I was put into a labor kind of a work, just nothing but labor. And we were an all Indian crew. It was directed by, his first name was Bill, he was our foreman. We was put into a crew of Indians, just nothing but Cheyennes who were to be put into a labor spot. So we started out working to take over what you might call the dirty jobs. We stepped into places like cleaning out ditches for sewers, and we got right down to where we were working underneath -- right inside the construction of the building. It was so hard to work there for me and for the people that was working there, the Cheyennes that -- it was really hard because the expectation of us was demanding. We had to be there on time. We had to do things that other people weren't doing. We had to finish things -- we were given a time limit. We were given a project to do, and to do it in a few minutes, or do it in a few hours, a few days, but we had to have that thing done when they said it was supposed to be done. This is what came out to be, and it was really hard for me to work there. I had nowhere else to go for support for my family. I'm new at this. I just started my family, and it was really hard for me to do. I had just gotten my house and the tribal council had just allotted me a piece of land to put my house, and it was something new for me. Working for the plants, we're working for Bechtel, it was really hard because they were demanding. They were demanding a lot from not just myself alone, but from the whole crew, they were demanding a lot. We had to be there on time. We had to do things that were just really labor, that were hard core labor, and a lot of them got fired because they weren't there on time. A lot of them got fired because they came and complained, and they said, well, if you can't do it, okay then, we're going to lay off; we'll get somebody else to do it. It just got down to where they was just cutting us off piece by piece. Pretty soon there was half of a Cheyenne crew. The rest of the crew was white, all white, and we had to try to work with these. Every time they sent the crew out, it seemed like they divided us into whites and Indians, and they always shoved us around like that. The first strike they ever went on, the labor union, they said we were fired, and they said we would be automatically hired then. They said we'd get back on automatically after the strike was over. So that's what I figured, I was fired. To me, fired means you have no more job. You have nothing to stick around for. So, I didn't go back. I tried to look for another job. If they make jobs like that, it's going to be pretty hard for the Cheyennes to work, to demand as much as they demanded when I first started. I guess now that plants 1 and 2 are almost completed, I guess they have just almost completely laid off all Cheyennes that were working there. I don't know how it's going to turn out, but the demand that goes through an Indian crew is kind of hard. Sometimes I didn't want to go to work but I had to, because that was the only way I could have means to support my family, and I was trying to survive. These jobs that are going to be open for plants 3 and 4 are going to be so demanding for the Indians that they're just going to wipe us out, I think. The demands are too stiff for the Cheyennes.

I guess that's all I have to say.

HEARINGS EXAMINER: Very well. Thank you, sir.

Mr. Bellingham can ask you some questions on cross-examination.

EXAMINATION OF VANCE LITTLEBIRD

Cross, by Applicants,

By Mr. Bellingham:

Q You indicated a couple of times that you had to be there on time. Now I assume the whites had to be there on time, also, did they not?

A I couldn't really tell you that. If I was white, standing on the other side, maybe I could answer that, but as far as I was concerned, we had to be there on time. If we wasn't, we were laid off, or were just flat given our check and telling us to move on.

Q Well, do you think it's asking you too much for you to be there on time for work?

A Oh, no, it isn't. I guess you have to be on time for every place you work.

Q How old are you, sir?

A I am twenty-three.

Q You feel that the Northern Cheyenne were discriminated against on the job, then? Do you know what I mean by discriminated against?

A No, I don't.

Q Excuse me, I'm sorry. Do you think the Northern Cheyenne were picked on?

A Yeah.

Q They were? Why do you think that?

A Because they were out to make more crews and they were just trying to open up positions for, I guess, the list they have at the labor union in Billings. I think probably two percent out of every Cheyenne that goes up there to apply for it, they always have -- they always tell them that there's 50 or 60 guys ahead of them, so I think they just wanted to eliminate them.

Q Once having hired the Northern Cheyenne, you feel that they wanted to get rid of them, then, is that right?

A Yeah.

Q Why would they hire them in the first place? To make it look good?

A Yeah.

Q Okay. Now, Mr. Walden, in his testimony, said that during the spring of '75, approximately 70 Indians were employed on the project by Bechtel - that's units 1 and 2 - and he would estimate between 30 and 40 of these were Northern Cheyenne. Do you think that figure is too high?

A I don't know. I haven't taken it upon myself to figure it like that.

Q You say the jobs are too stiff for the Cheyennes. What did you mean by that?

A Well, they've got jobs like working in dangerous places where they just had finished digging, to where they have to make it like where it's hard, where they can start working. In other words, they had to take the gumbo out of places, you know, where they wanted to work to start the stack, to start the tracks. They just had to work in gumbo like. You know what I'm talking about?

Q It made it tough going?

A Yeah.

Q Well, somebody had to do the job, didn't they?

A Yeah.

Q But you didn't feel that it was right that the Northern Cheyenne were forced to do that, is that right? You thought it was too stiff for the Northern Cheyenne?

A Yeah, because it seemed like they were the only ones. Like, well, since we got those guys, well, why not put them on that. They didn't get our crew together after they started cutting it down. They didn't get it together and say, well, we'll work together, you know, where it's equal. Like, I'm working with you, me being an Indian and you being a white, you know, to work together to move that gumbo. It didn't work out that way. It worked to where, well, these guys, since we have these guys, why don't we put them on that.

Q Who eventually moved the gumbo?

A We did.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Thank you very much, sir, and you're excused. Mr. Lafever?

DICK LAFEVER, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF DICK LAFEVER WAS DIRECTED TO BE INSERTED AT THIS POINT.)

DICK LAFEVER
STATEMENT TO NATURAL RESOURCES BOARD
HELENA, MONTANA
MARCH 16, 1976

This, the last day of testimony before the Natural Resources Board subsequent to counter testimony by appropriate Pro-development individuals, will by most important indeed.

You, the members of this Board, are truly in a precarious situation. To contemplate a decision in favor of not building Units 3 and 4 at Colstrip, could bring a great deal of criticism and avoidance by giant political mechanisms within our State. I truly appreciate your situation.

The Northern Cheyenne People, like many residents of Eastern Montana, lay claim to a small portion of land in the immediate area surrounding Colstrip. You have heard a great deal of testimony as to the potential adverse environmental effects of Units 3 and 4, as well as Units 1 and 2, to the land, air and water.

What other effects can this massive coal devedlpment have on the residents of the Northern Cheyenne Reservation and other communities surrounding Colstrip? Let me elaborate:

The educational system presently existing on the Northern Cheyenne Reservation has recently been "overhauled." Nearly one hundred years ago the St. Labre Mission and School was established at Ashland, Montana. Control and direction for this school was the responsibility of appropriate church officials. This school is now controlled by an all Indian School Board operating seperately from the church.

The school I am most familiar with is at Busby. For nearly seventy years the Bureau of Indian Affairs controlled the education of several hundred Northern Cheyennes with no regard to our culture, traditions, values, life styles, learning styles and desires.

Beginning in the early 1970's the community of Busby, through the leadership of key tribal leaders, sought to gain control of the Busby School. The people of Busby and the reservation were concerned about the fact that not one Northern Cheyenne graduate of Busby High School had ever completed college or obtained a degree.

After many months of negotiating with governmental officials, a formal contract was signed in July, 1972.

Since 1972, the school at Busby has initiated many programs to deal with low achievement, drop-outs, self-confidence of students, cultural awareness, Indianization of the curriculum and so forth.

The parents and guardians of students presently enrolled at Busby School see a great change in the school and more importantly, in their children.

Absenteeism has decreased from 40% to less than 6% during past three years. Achievement levels have increased dramatically and attitudes have become more positive towards completing school.

The Cheyenne language, customs, traditions and values are being taught in the school. This has increased the level of pride and enthusiasm in the school.

Last year a Drug and Alcoholism Program was started to combat the rising increase of drug and alcohol abuse.

It is common knowledge around the reservation that Colstrip is the place to obtain drugs, both hard drugs and marijuana.

We presently have on our staff a counselor who is on leave from the Rimrock Guidance Foundation in Billings. Next year, under our Title IV Grant, an additional counselor will be hired specifically for the Elementary School.

Let me now speak specifically of what could very possibly exist with the added development at Colstrip. We can contemplate a thriving economy with maximum employment, fat checking accounts, new business opportunities and a happy and fulfilling life. But let us be realistic.

You are all familiar with Role Playing. Let us assume you are the Head of a Household on the Northern Cheyenne Reservation. Your income avarages approximately $1,500.00 annually. You and your wife have both graduated from High School, but lack training and skills to obtain adequate employment. You have five children and four of your children attend one of the Reservation Schools.

You have recently moved into one of the new housing units being built around the reservation and just enrolled in the Indian Action Team training Program. The training program is designed to train carpenters, electricians, heavy equipment operators, etc.

You are aware of the programs being implemented in the school your children attend; programs designed to gather Community support and interest; programs designed to teach Indian Values and traditions. These and other things that were denied you, but so wanted to know and learn.

Your children wonder why you don't teach these things to them, instead of the teachers, most of these white. You begin to wonder and doubt yourself. You become more confused about your identity and usefullness, so you turn to your old friend, booze. The old stand-by. The one thing that will make you feel like a "man" again.

The extension of this role playing can go on and on, so to the point.

Through the combined and dedicated efforts of many organizations and people on and near the reservation, many of the deadly and persisting ills confronting the Northern Cheyenne People were beginning to disappear or minimize. Through an adequate and relevant educational system your children will have a greater chance of survival than you. However, this can change!

"Wait, the future is in doubt, what is happening. Energy crisis, what is that? Why can't we live our lives and build our futures without all of this "Coal Development". Sure I need coal, I need it for my stoker in the basement, many times I wait two weeks for the tribal truck to deliver it."

The distant cities that receive the benefits of this Eastern Montana Coal development probably don't even know of the Northern Cheyennes.

"I read of proposed development on our reservation. Won't the building of Units 3 and 4, tell me that the people, Indian or Non-Indian, don't have any voice in the future? It will probably mean its o.k., to develop coal on the reservation, they're doing it everywhere else."

"But what about the schools, they're doing so much to educate my children. Will this development mean another change? Will this mean my children are not to survive, accept the inevitable and forget the past."

"What about my oldest daughter? She has recently quit school to run around with a construction worker, who lives on the reservation and works at Colstrip. Then there's the drinking. Most of my friends drink and don't care about the increased alcoholism among the younger people."

"Maybe Sweet Medicine (comparable to Messiah) was right. Maybe we are to act in different and strange ways. I suppose its alright, even President Nixon, before he resigned, designated this region a National Sacrifice Area."

"I wonder why they just can't take the coal, if they must, and take it somewhere else to burn. Someplace where there is plenty of water and where the electricity is needed. I guess its because they probably have too much pollution already and that Montana needs to have this real chance to become industrialized."

"Well, I shouldn't be too suprised. The Cheyennes couldn't be killed, couldn't be moved, but like the rest of the world we sure can be polluted. This time the Northern Cheyennes will not be alone, there will be a lot of white people in the same camp."

I have a great deal of faith in the basic qualities of Man. Those qualities that seperate us from lower animal species, the one quality most important at this time being, Reason.

Reason, Board Members, dictate that Units 3 and 4 are not to be allowed.

I thank you for your time and invite you to visit our reservation.

EXAMINATION OF DICK LAFEVER

Cross, by Applicants,

By Mr. Bellingham:

Q When was the statement prepared, Mr. Lafever?

A The statement was prepared last week.

Q By whom?

A By myself.

Q Did you have any help with it?

A No.

Q How old are you, sir?

A Thirty years old.

Q What is your occupation?

A I am the elementary school principal at Busby, and if I may elaborate how I got to be in that position, it might be helpful. I am an enrolled member of the Cheyenne Tribe. I guess, according to Mr. Woodenlegs' testimony, I have some of that fast blood and ways in me. I don't look Cheyenne. I lived on the reservation for my entire life except for the time I spent at college, at Eastern Montana College and in Bozeman. I attended school at Busby, Lame Deer, and at Colstrip. I graduated from Colstrip High School in 1964. In May of 1973 I was hired as the first contract administrator for the new school at Busby. I've been there ever since.

Q I have just a few questions. You indicate in your statement that for nearly 70 years the Bureau of Indian Affairs controlled the education of several hundred Northern Cheyennes with no regard to their culture, traditions, values, life styles, learning styles, and desires?

A That's correct.

Q That's your opinion, is it not?

A Yes.

Q And I assume that's the opinion of many Northern Cheyenne Indians?

A Yes.

Q And you mentioned the increasing rise of drug and alcohol abuse in the area where you live, I assume?

A For approximately seven years since I've graduated from Eastern, and subsequent to my return to graduate school, I've been involved as both the adult education director, director of formerly the CAP programs, the OEO programs, which included the Northern Cheyenne alcoholism project. I was a classroom teacher at Lame Deer for three years, and even ran a grocery store for a short while. During that time, I've seen, probably within the last two years, a higher incidence of drug and alcoholism abuse in these areas than before. Of course, it is true that alcoholism has been a major problem on the reservation and the surrounding area for a good many years. Interestingly enough, as soon as the activity began to happen in Colstrip, which I'm very familiar with, the people -- as I knew it, Colstrip had 14 people -- and so whatever problems existed at that time were quite small compared to the problems now. But since the development at Colstrip, I've seen a larger and much greater incidence of drug and alcoholism abuse. Consequently, an attempt is being made, a very good attempt, to institute a drug and alcoholism program in our school, in the other schools on the reservation. At this time, we have on our staff a gentleman from the Rimrock Guidance Foundation in Billings, who is on annual leave -- not annual leave, sabbatical, working at our school developing this program.

Q I gather from the tenor of your statement here that you're afraid that if units 3 and 4 are built, that it'll -- could lead to the development of coal on the reservation? Is that a fear in your mind?

A Yes.

Q Well are you aware of the present status of coal leases and permits to lease on the reservation?

A I have some knowledge in that area.

Q Well, there's previous testimony here that the tribal council has attempted to nullify all of these here; are you aware of that?

A Yes.

Q If that holds up, there will be no future development of coal on the reservation, will there?

A If the Supreme Court rules in favor in another situation I'm sure you're familiar with as far as the Northern Cheyenne reservation is concerned, rules in favor of mineral rights returning to the original allottees, it could have a completely different bearing on the situation, too, sir. If the minerals were to remain in the ownership of the tribe.

Q So as far as the future development of coal on the reservation right now, it's speculation one way or another, isn't it, as to what might happen?

A I think on the part of many people it's speculation, but I think as far as the power companies are concerned, I think it's much more than that.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Do you have anything further you wish to add, sir?

WITNESS: Well, nothing more than I think that as far as my testimony is concerned, sir, it is pertaining more to the educational aspects of the Northern Cheyenne people in terms of the education and the development of institutions on the reservation. And it is a very interesting phenomena that's happened, and if I may speak to that, is that in all three reservation schools, at Labrie, which used to be a parochial school and now is a private Indian controlled school, the school at Lame Deer, which is public and remains public, and the former BIA school at Busby, we have never had a high school graduate from our school graduate from a four year institution of higher learning. For seven years the Bureau operated this institution. For three years we've been under a contract with the Bureau to operate the school under local control. And, of course, you take a look at an institution, an elementary and high school, you're talking about a complete redevelopment in a direction that a school will take, whether it's in Helena, or Busby, or wherever, and you are trying to perpetuate within your school system the approximate facsimile of the public that sends their kids to school, at a particular school. I think this is what is happening on the reservation, is that this is the first time the Indian people have had control, actual legal control, jurisdiction in the operation of their school programs. The absenteeism at Busby has decreased from 40% to less than 6% in the three years that I've been affiliated with the school. The implementation of cultural programs, bilingual education, bicultural education, has added a great deal to the positive self image that students have.

HEARINGS EXAMINER: Mr. Lafever, I don't want to cut you off, but our tape has run out, so we've got to take a recess now and I think you've covered that pretty well in your statement. Thank you very much. We're out of tape and we'll take a fifteen minute recess.

(RECESSED AT 3:05 P.M.)

Following a brief recess, the hearing reconvened at 3:25 P.M. on March 16, 1976.

EVERETT KEYES, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

HEARINGS EXAMINER: You appear as an opponent, and your statement will go to the board, and Mr. Ross will conduct the cross-examination.

MR. PETERSON: We don't seem to have his statement.

HEARINGS EXAMINER: Do you have an extra copy with you there, Mr. Keyes?

WITNESS: I gave them to you.

HEARINGS EXAMINER: All right.

Supplement to Written Statement

By Mr. Keyes:

My name is Everett Keyes, and I forgive the chairman for mispronouncing it, but a lot of people do. I am past president of the --

HEARINGS EXAMINER: Mr. Keyes?

WITNESS: Yes.

HEARINGS EXAMINER: When you prepare the written statement, you don't have to read it into the record.

WITNESS: Right.

HEARINGS EXAMINER: It goes right to the board members, so you won't have to reread all the stuff you've got there.

WITNESS: I'm only going to read three paragraphs.

HEARINGS EXAMINER: Okay, go ahead.

I'm past president of the Gallatin Sportsman Association and am now ex-officio member of the board of directors. I was recently elected a Montana Wildlife Federation president for district number 2. The statements that I'm making today were written by Harry McNeil, president of the Montana Wildlife Federation, and in which the Gallatin Sportsman Association concurs. The statement deals with the Montana Wildlife Federation articles of incorporation and its purposes and objectives, and also when it was organized, and has to do with its membership, who can be members and how they function. Also it deals with the affiliated groups which are the sportsmen's organizations throughout Montana. It also has to do with the officers and their affiliates, how they promote wildlife habitat, acquisition, and such things. It also has to do with land policy and how they try to institute good policies. However, that can be read from the records that I've handed in, and I'm just going to read these last three paragraphs.

In 1967 a resolution was passed with the following language and unmistakable intent. The Montana Wildlife Federation specifically opposes the sale of any public land which might in any way prejudice the right of the American public to enjoy and use public lands. Based on previous directives from the membership as outlined in our written testimony, the Montana Wildlife Federation opposes the construction of plants 3 and 4 on the grounds that they will have a long range adverse impact on wildlife habitat, on the outdoor recreation resource, and on the opportunity to enjoy these resources. The plants' transmission lines, roads, sludge ponds, residents, and facilities for employees will occupy land that was previously available to wildlife and, in most cases, to recreational users. The unknown effects of potential air and water pollution on wildlife and wildlife habitat require those concerned to ask for more information and for more time to gather this information before approval is given for construction of plants 3 and 4. We are not prepared to define the extent of the problem, but we have no doubt there will be perimeter loss and degradation of vegetative cover due to air pollution. We also have no doubt that some type of water pollution will originate from activities related to plants 3 and 4. Pollution of any kind will result in additional habitat losses as well as being a potential health hazard for wildlife. These concerns require that the Montana Wildlife Federation oppose construction of plants 3 and 4. Thank you very much.

(THE WRITTEN DIRECT TESTIMONY OF MR. EVERETT KEYES WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976 Elliott Kayer

Statement for
Plants 3 & 4 Hearing

The Montana Wildlife Federation is a non-profit corporation under the laws of the State of Montana.

In the Articles of Incorporation the Federation identified the following purposes and objectives:

1. To promote and foster general and continued movement for the conservation, restoration, protection and scientific supervision by the State of Montana of all game, fish, fowl and other wildlife in its natural habitat in the State of Montana, insofar as the same may be permitted by the laws of the State of Montana.
2. To serve as a statewide organization of sportsmen and those interested in wildlife, through which information pertaining to the natural resources of the State of Montana, and the wildlife thereof, may be gathered and distributed to the affiliated groups of this corporation and to the general public.

The Montana Wildlife Federation was organized in 1936 and incorporated in 1951.

Membership in the Montana Wildlife Federation is open to any citizen, or group of citizens, with objectives compatible with the parent organization.

Membership numbers increase with the need to address issues critical to wildlife and outdoor recreation; numbers decline when the membership in local organizations believe that the Federation is becoming involved in issues that are detrimental to its economic welfare. The Montana Wildlife Federation has had a high of 52 affiliated clubs, a mailing list of 10,000, and has represented the interests of the many thousands of fishing and hunting license holders.

In addition to being open to affiliation, the Montana Wildlife Federation maintains communication and coordination with the Montana Wilderness Association, the Enviromental Information Center, the Sierra Club, the League of Women Voters, the Farmers' Union, the American Association of University Women, the AFL-CIO, the Soil and Water Conservation Districts, youth and local de-facto groups. The Montana Wildlife Federation also has representation on agency advisory boards and committees involved in the allocation and management of wildlife, wild lands and natural resources.

Officers and affiliates of the Montana Wildlife Federation have promoted wildlife habitat acquisition, development and management, recreational access, adequate funding and staffing of resource management agencies, use of recreational waterways, land use planning, resource inventorying, clean air, clean water, and optimum fish and game populations. The Montana Wildlife Federation is an affiliate of the three and one-half million member National Wildlife Federation.

To give guidance and clarification of overall objectives, the Montana Wildlife Federation, in convention, adopts resolutions and policy statements. The Water Policy adopted June 1966 includes the following which would be applicable to our position on Colstrip generating plants 3 and 4:

1. The Montana Wildlife Federation believes that management and use of Montana's water resources must be consistent with the integrated long-range needs of the people of Montana and the nation.
2. The Federation believes that water resource planning based on short-term,

stop-gap developments, on obsolete custom, or on the perpetuation of vested interest minorities, is unrealistic in the context of current and future requirements of Montana and the Nation.

3. Planning for optimum water use must be founded on the knowledge and acceptance that present social, esthetic, and recreational uses of water are legitimate human values fully equivalent to other economic values.

The Land Policy adopted June 1967 also provides guidelines applicable to the develpment of Montana coals and the acceptability of minemouth generation:

1. Federally owned lands are the key areas available for optimum wildlife and recreation production through proper management. The lands, with few exceptions, are open to public entry for recreational purposes.
2. The primary intent of Federal land statues must be the protection and improvement of the basic natural resources--soil, water, vegetation, and air. Determination and allocation of permissible consumptive uses, or combinations thereof, will follow.
3. Statutes must establish the fact that social, esthetic, and recreational uses of land represent human values equivalent to economic values.
4. Statutes must ensure flexibility in land management to accommodate changing public needs.
5. Statutes must include a formula for stabilizing, standardizing, and increasing payments in lieu of taxes to local and state governments.

Also in 1967, a resolution was passed with the following language and unmistakable intent, "The Montana Wildlife Federation.....specifically opposes the sale of any public lands which might in any way prejudice the right of the American public to enjoy and use public lands."

Based on these directives from the membership, we would oppose the construction of plants 3 and 4 on the grounds that they will have a long-range, adverse impact on wildlife habitat, the outdoor recreation resource, and the opportunity to enjoy these resources. The plants' transmission lines, roads, sludge ponds, residents, and facilities for employees, will occupy land that was previously available to wildlife and, in most cases, to recreational users.

The unknown effects of potential air and water pollution on wildlife and wildlife habitat require those concerned to ask for more information, and for more time to gather this information, before approval is given for construction of plants 3 and 4.

We are not prepared to define the extent of the problem, but we have no doubt, there will be perimeter loss and degradation of vegetative cover due to air pollution. We also have no doubt that some type of water pollution will originate from activities related to plants 3 and 4. Pollution of any kind will result in additional habitat losses as well as being a potential health hazard for wildlife. These concerns require that Montana Wildlife Federation oppose construction of plants 3 and 4.

MR. PETERSON: Now, Mr. Davis, while I think of it I, at this time, would like to put on the record a motion together with an objection which I should have interposed before the testimony of one of the public witnesses, Mr. Burton Farley. I noticed after Mr. Farley had left the stand that I received a communication on December 24, 1975, from Leo Graybill, who is the attorney for the Northern Plains Resource Council, directed to all parties in the proceeding including the Hearings Examiner in which Burton Farley was listed as a witness for the Northern Plains Resource Council. Mr. Farley, of course, appeared as a public witness thereafter without having been withdrawn as a listed witness for the Northern Plains Resource Council. Therefore, I move to strike the testimony of Mr. Farley on grounds that the order of the Hearings Examiner was violated in that the witness, Mr. Farley, did not file his written statement in accordance with the order of the Hearings Examiner and, also, that it violates the intent of the order to have the public parties who have registered in these proceedings present their written testimony in advance of the cross-examination. This is only the second occasion that this has happened. I consider, however, one occasion one too many. I realize that the testimony has already gone on, but I want the record to show this because I don't know whether there will be other instances where this will occur or not.

HEARINGS EXAMINER: Very well, the record will reflect your objection and my ruling which will be it's overruled. You may cross-examine this witness.

MR. PETERSON: Maybe I should move to strike the order of the Hearings Examiner on December 10, 1975, as having no effect in this proceeding.

HEARINGS EXAMINER: Well, I would have to think about that. I could grant it and we could start over, but I don't think I'll do that.

MR. PETERSON: Well, that would be all right.

HEARINGS EXAMINER: We'll overrule that.

MR. PETERSON: All right.

EXAMINATION OF MR. EVERETT KEYES

Cross, by Applicants

By Mr. Peterson:

Q Mr. Keyes, you make a statement on the last paragraph of your statement that you have no doubt that some type of water pollution will originate from the activities relating to plants 3 and 4. What type of water pollution is going to originate from these plants when there will be no discharge from these plants into any stream located in the state of Montana or elsewhere?

A Certainly they're using water in these plants. If they go into ponds, what prevents them from seeping through the ground and eventually getting into streams?

Q Is that what you say is going to happen?

A That's what I think might happen because I've seen it happen when I was over in India, saw that thing happen.

Q Well, irrespective of your experience in India, do you feel that there will be seepage from these ponds into Armell's Creek?

A I can't say because I've never been down there, so I don't know what the relationship of the plants to the stream.

Q Do you know whether or not the seepage from the ponds, particularly the surge pond or the reservior, will have any adverse affect in the event there is seepage on any of the waters of the Yellowstone or on Armell's Creek?

A It all depends upon what type of chemicals seep through and get in the water.

Q Well, do you understand, sir, that the surge pond water is, in fact, Yellowstone River water untreated?

A Yes.

Q Well, how can you have any affect on water pollution if you're returning the same quality of water?

A It goes through the plants, doesn't it?

Q Not from the surge pond.

A Okay.

Q Have you had an opportunity to read any of the surveys that have been taken on the base line data studies relative to wildlife habitat and wildlife counts in the Colstrip area?

A Not personally, but the person that wrote this, the president of the Montana Wildlife Federation, has.

Q Do you know, sir, that there has been an increase in deer count in the Colstrip 10 by 20 area since the construction of Colstrip unit 1?

A There has been an increase?

Q Yes.

A I can't agree with that.

Q You can't? All right.

A For this reason.

Q Go ahead, sir.

A I hunt down there, have for the last five years, and last year we hunted all over that area, and only saw four deer in three days.

Q How close were you to the plants?

A Well, we went right through Ashland and on the Tongue River, went up the Tongue River a ways; I don't know how close that is.

Q I see. Did you see any pheasant down there?

A Three years ago seven of us went down there; in an hour and a half we had 21 pheasants. Last year we saw four.

Q So you're attributing that loss in game population to the plants?

A Not necessarily.

Q Are you familiar with any study contributed to by the Montana Fish and Game Department in conjunction with the Idaho State Fish and Game Department relative to the affects of transmission lines on elk herds?

A I've heard conversations about them, but I wouldn't want to say positively that I have enough information to make a statement.

Q Okay. Who are the members of the board of directors of the Montana Wildlife Federation?

A Harry McNeil is president.

Q Is he from Bozeman, sir?

A Yes, and Stuker from up around Havre, I forget his first name, is vice-president; Oglinder from Ronan is first vice-president, and I just haven't the names of the others, I can't recall.

Q All right, sir. How many board of director members are there?

A Let's see, there should be five.

Q Five. Was there a poll taken of the membership of the Montana Wildlife Federation regarding Colstrip units 3 and 4?

A Not that I know of.

MR. PETERSON: I have no further questions and thank you, Mr. Keyes.

HEARINGS EXAMINER: Thank you, sir, and you're going to get back for your meeting all right. I say you're going to make it back for your meeting I guess.

WITNESS: What's that?

HEARINGS EXAMINER: I say you'll make it back for your meeting as I promised you. Didn't you have to get back to Bozeman?

WITNESS: Oh, yes.

HEARINGS EXAMINER: Okay, sir. Well, you're excused, you can go then.

WITNESS: Oh, very good; thank you very much.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Mary Olson.

MARY OLSON, appearing as a public witness, having been first duly sworn upon her oath, both as to her written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF MRS. MARY OLSON WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

I am a native of Montana. My parents were homesteaders in 1910. My husband's in 1912. I went to school and grew up in the Hot Springs area.

327 Edith Missoula

The blue skies and wide open spaces of Montana are dear to me and my family. I dislike the power lines crossing the hills to the north of the ranch where I grew up. Also the thought of possibly more to the north of Missoula.

Since they claim more electricity is needed than lets transport the coal (which we unfortunately have in Montana) to the states that are prepared to convert it. Many jobs will be made in this way.

Let's keep the land uncluttered, the air and water clean in our great State for my children and grandchildren -but more for all our children and grand children. Thank You.

Mary A. Olson

HEARINGS EXAMINER: You filed a written statement, Mary A. Olson?

WITNESS: Yes, I did.

HEARINGS EXAMINER: And do you have anything you wish to supplement, or do you just want to use your statement?

WITNESS: Should I read this?

HEARINGS EXAMINER: No, it's not necessary and I'll explain why. Since the board has to decide this on the record, it is recorded and goes to them in written form anyway, so it's just kind of a duplication of the process, and since we do have so many waiting, if you have anything you want to add to it you certainly may, but if that constitutes your statement.

WITNESS: I don't believe so.

HEARINGS EXAMINER: Thank you very much. Mr. Peterson, you may cross-examine.

EXAMINATION OF MRS. MARY OLSON

Cross, by Applicants

By Mr. Peterson:

Q Is it Mrs. Olson?

A Yes.

Q I don't believe I got your address?

A 327 Edith Street, Missoula, Montana.

Q Were you asked to appear here today, Mrs. Olson, by anyone?

A No, I was not. I came here last Thursday hoping to appear, my husband and I, but then the hearings were called off so we came back over today.

Q Okay. You make the statement in here that Montana unfortunately has coal in this state?

A Right.

Q What do you mean by that?

A I don't like to see our state raped.

Q You don't want the strip mining to go on?

A If it has to be, yes, but I would prefer that it wasn't there. I love Montana, and I would like to see, would prefer it to have gone back to what it was maybe 50 years ago?

Q Fifty?

A Yes.

Q Before electricity?

A I lived in the kerosene age.

Q And that's where you want to go now?

A I could live with it.

Q Do you think everyone else should?

A No, I don't want to impose my views on anyone else.

Q What is your husband's occupation?

A He's a projectionist.

Q And do you have a family in Missoula?

A I have five children; my husband was married before, and he has five children. We have a total of 34 grandchildren between us and two great-grandchildren.

Q All of them live and work in Montana?

A No, they don't, not all of them; but I am concerned about Montana for all of our grandchildren, not just my own, yours, too.

Q I'm concerned about my son getting a job in Montana. I wonder how many of your children are working in Montana?

A Well, I think that right now I work for the university, and I think that perhaps many of our educated people have to go away anyway if they want to -- materialism seems to be the thing, so if they want a lot of money, then they're going to have to go elsewhere to get it.

Q Why do you have to graduate from a university to get a job? Don't you think that other people are entitled to jobs besides those going to universities?

A No, I don't. I agree that you don't have to be a graduate. I guess that was just a bad statement on my part.

Q Well, there has been testimony in this record from one of your university professors down there, Dr. Polson, that our net out migration of young people from Montana approximates 17,500 a year, that's net out migration?

A From the university school?

Q From the state of Montana. Do you have any plan to correct that out migration?

A No.

Q Have you ever given it any thought?

A No, I guess I haven't.

MR. PETERSON: That's all I have, thank you.

HEARINGS EXAMINER: Thank you, and your testimony will go to the board, Mrs. Olson.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Karen Wagner?

KAREN A. WAGNER, appearing as a public witness, having been first duly sworn upon her oath, both as to her written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF KAREN A. WAGNER WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

March 15, 1976

Mr. Carl Davis
Dept. of Natural Resources
Helena, Mt. 59601

Dear Sir:

I am a resident of East Missoula and would like to go on record as opposed to the proposed Colstrip #3 and #4 power plants. It makes no sense to me to tear up Montana and send 75% of the power to Oregon, Idaho, and Washington.

We take pride in Montana, the Big Sky Country, with all our natural beauty. If these power plants are built, we will be destroying the very thing that makes Montana one of the most beautiful states in our Nation. Once our lands are stripped of their ore, there is no way man can bring them back to their natural state.

The power plants, if allowed to be built, would not only destroy the land being strip mined, but all throughout the state. The proposed 500,000 volt transmission lines will scar the entire North-Western part of our state, and also that of our beautiful neighboring states.

East Missoula is situated within a mile of the proposed transmission lines. My family would be exposed daily to the dangers of crossing under the lines to commute to work. Because of the uglyness of the huge transmission lines and towers, the problems with radio and TV reception near the lines, and of the potential danger to human beings and livestock or wildlife around them, as a citizen of Montana, strongly oppose the Colstrip 3 & 4 power plants and transmission lines.

Sincerely,

Karen A. Wagner

Karen A. Wagner
[illegible] Ave.
E. Missoula, Mt. 59801

EXAMINATION OF KAREN A. WAGNER

Cross, by Applicants

By Mr. Ross:

Q What is your occupation?

A I'm a homemaker; I've got four children, and I also work in the Missoula district 1 lunch program.

Q What is your husband's occupation?

A He works at U. S. Plywood at Bonner, Montana.

Q When did you decide to testify in this hearing?

A I considered it last week, but I was ill so I decided to come over Friday.

Q Did you read the editorial in the Missoulian encouraging people to come testify?

A Yes, I keep in close contact with the Missoulian.

Q You state in your statement that you don't like to see us sending power out of state. Do you own a car?

A I own a car.

Q Do you own a refrigerator?

A Yes.

Q Do you own a stove?

A Yes.

Q Are these products manufactured in Montana?

A No, I would assume not.

Q What would you think if other states did not want to send those items out of their state?

A I guess they've got that prerogative. I just don't like to see Montana exploited.

Q You indicate that our lands are being stripped of their ores.

Do you have any, or are you aware that based on the figures of the director of the Department of Natural Resources in this hearing that based upon the 1975 rate of coal strip mining in Montana, and based on the coal available in Montana, that it would be something like 5,000 years before the coal is used; were you aware of that?

A I'm aware of that.

Q You also make references to the strip mining destroying our state. Are you aware that Montana has enacted what is sometimes called the most stringent strip mining law in the country?

A We have some very strong strip mining laws, but I also, as it states in my letter, or whatever you want to call it, once that land is mined, there is no way you're going to bring it back to its natural state.

Q You don't believe that the land can be reclaimed?

A I don't believe it will be.

Q What's the basis for that statement that you don't think that it will be?

A Well, you can look all over Montana and you can see it. I guess it's because of the past. You look at our city of Butte, it's about one of the most ugliest things you want to see; that's a big rape.

Q But the strip mining law was not applicable then, was it?

A No, it was not.

Q You haven't done any studies or read any studies, have you, on the feasibility of reclamation in eastern Montana?

A No.

Q You also mention problems of radio and TV reception from the transmission lines. Were you aware that the applicants have proposed to take a survey of all radio and TV in the area of the transmission lines both before and after the construction of the transmission lines, and have promised to restore any radio and TV reception to its original state; were you aware of that?

A I'm not aware of that, but otherwise you're stating that there will be interference? If Montana Power is willing to correct it, then you're saying that there will be interference; is this right?

Q No, I just asked you if you're aware that the applicants in this case have made a study whereby they will check radio and TV reception both prior to and after construction of the transmission lines, and that if any interference is found, that it will be corrected; and I'm just asking were you aware of that?

A I was aware of that.

MR. PETERSON: Thank you. No further questions.

HEARINGS EXAMINER: Thank you very much, and your testimony will go to the board.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Jennifer Geering.

JENNIFER GEERING, appearing as a public witness, having been first duly sworn upon her oath, both as to her written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF JENNIFER GEERING WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

STATEMENT OF HORSESHOE HILLS ASSOCIATION

My name is Jennifer Geering; I am a high school student attending Billings Senior High School, and am representing the Horseshoe Hills Association, a landowners' association of Billings, Montana. I am making this statement by authority of our Board of Directors.

We live approximately one mile east of the Corette Plant, while Lockwood School, educating over one thousand children in grades kindergarten through nine, lies about two and three quarters miles northeast of the plant.

The Draft Environmental Impact Statement on Colstrip 3 and 4 uses Billings to predict the potential air pollution problem for Colstrip. Our experiences with pollution are, therefore, relevant to this case.

We are aware of the testimony of Mr. C. C. Gordon, recently presented at this hearing. One of the sites he used as a study area was located on the Snook property on Sacrifice Bluff, which is across the road from our area. Also, individual members of our association have conducted studies on pollution.

In the Horseshoe Hills area, and at the Lockwood School, which are downwind from the Montana Power

Company's Corette Plant, the average sulphur dioxide levels have reached double the state standard. Some monthly averages have been triple the standard.

Fluoride in the air at Lockwood School has at times reached twenty times the state standard, and, at our homes, eleven times the state standard.

We describe the air pollution problem in relation to a "standard", and yet this arbitrary measure has not been demonstrated to be sufficient to protect human health, agriculture, or property.

Fluoride in grass is as high as five times the state standard. Concentrations of fluoride in plants, such as those found in our area have been shown to cause fluorosis in livestock. Analysis of the bones of mice from our area have revealed fluoride concentrations of 2300 parts per million, and deer, 15 hundred parts per million. Both of these concentrations are about four to five times more than is found in unpolluted areas.

On the Snook property, site of a study area, and approximately 500 meters east of the coal-fired Corette Plant, chemical analysis data shows sulphur levels in Ponderosa pine needles that exceed levels in the Colstrip area sites by thirty five to one humdred percent. Fluoride levels parts per million versus 206 parts per million.)

However, our concern lies more with the people, who eat food grown in such places. Our area has several wheat fields, and Montana is a largely agricultural state.

For the most part, we are ignorant of the ways pollution may be affecting our health. However, we do have enough information to be deeply concerned.

From where we live, we can frequently see fly ash in our valleys. We find it on our cars, and wonder about the rotting needles on the pines.

I have described this situation which exists in our area, because the impact statement predicts it will be duplicated in the Colstrip area.

In view of all of the above, we cannot subscribe to a rationale that would permit environmental damage, hazard human health, and promote social problems, for the purpose of inefficiently producing energy, which need we consider to be highly questionable.

Furthermore, I do not believe that for [redacted] materialistic gain [redacted], we can risk forfeiting the health of the citizens of this state. The question here is not if, in the next twenty years, people will be able to turn on their television sets and have a picture appear, but rather if, in the

Next few years, people won't be falling over from poisons we didn't know existed and if we will still be able to breathe clean air, drink pure water and produce good food.

We, therefore, recommend that the State Board of Natural Resources consider the following alternative:
that the permit for units 3 and 4 be denied until such time as the Montana Power Company and associated can demonstrate that the Corette Plant and Colstrip units 1 and 2 can and will operate without damage to human health or to the environment, and until the Department of Health and Environmental Sciences has determined the effects of air pollution, and defines and enforces its necessary laws.

Respectfully submitted,

HORSESHOE HILLS ASSOCIATION

By

Jennifer Geering

EXAMINATION OF JENNIFER GEERING

Cross, by Applicants

By Mr. Peterson:

Q Now let's see, you're Jennifer Geering, and you're from Billings?

A Yes.

Q May I have your age, please?

A Seventeen. Since I am younger than you, I will probably be living in this state perhaps 10 years longer than you since you will probably die earlier than I will.

MR. BELLINGHAM: That's an understatement.

But anyway, I will have to live with the results of this Colstrip 3 and 4 if there are any bad ones, and therefore, I don't think I should be downgraded because of my age.

Q No, and I didn't intend to, and if you took it that way, I apologize.

A No, I'm just making sure that it's not taken that way.

Q Fine. You mention in your statement the Corette generating station in the Billings area?

A Pardon?

Q You mention in your statement the Corette generating station in the Billings area?

A Yes.

Q Have you had an opportunity to review the findings of the Yellowstone County air pollution board for the fiscal year 1973 to 1974, prepared by James L. Glenn?

A No, I haven't. I'm not pointing my finger at the Corette plant; I'm using them to pinpoint our location. I'm not --

Q Where did you -- oh, excuse me, I didn't mean to interrupt.

A Okay. There is some evidence in Clancy Gordon's report that the Corette plant is responsible for some of the air pollution, but I'm not pointing my finger at them.

Q Are the figures which you have in your statement, prepared statement, come from the written testimony of Clancy Gordon?

A Many of them do; we have also conducted some of our own.

Q I see. Have you, in fact, taken flouride samples in the area of Sacrifice Cliff and had them analyzed?

A Members of our group have.

Q Have you done histological work on this?

A Pardon?

Q Have you done histological work on the Ponderosa pine?

A I don't think I know that term; what is that?

Q Pardon me?

A What is histological?

Q Have you done any pathology on the pine needles; have you disected them and counted the --

A No, I haven't.

Q Okay.

A Most of what we have done is with air samples.

Q How do you do that, Jennifer.

A I have not done it myself.

Q What kind of air samples?

A It was done for me, I'm sorry.

Q Oh, well that's okay. There are so many different kinds, you know. Do you know what fly ash from a generating station looks like?

A Well, I presume that it's the clouds of murky stuff that hangs in the valley; it's very --

Q Dust, like dust?

A Like dirty smoke.

Q Do you know what particulate matter is?

A Particles.

Q Yes. And do you know that in the Colstrip generating stations there are scrubber systems devised for those systems?

A Yes, I have heard that.

Q And do you know that part of the scrubber system is to remove the particle matter so that it does not become an affluent?

A Yes, however, this has obviously not been done enough in Billings.

Q Well, do you know that there is a different system in Billings than is proposed for Colstrip?

A Well, what is proposed and -- I am personally afraid that some of these things will be allowed to lag since they have in Billings. I think that there's a possibility that they can anywhere in the state.

Q Oh, I see. Have you been to Colstrip unit number 1 since it became operational.

A Yes, I have.

Q And have you had an opportunity to examine the air pollution system there?

A No, I have nct.

Q Do you know what type of air pollution system is installed at the Billings generating station?

A No.

Q Okay.

MR. PETERSON: Well, I don't think I have anything else, Jennifer, and I appreciate your coming and offering your testimony because that is your right, and I think you've done an intelligent job in doing that. Thank you.

HEARINGS EXAMINER: Thank you. Your testimony will go to the board with the others.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Mr. MacIntyre? Mr. Pistoria?

PAUL G. PISTORIA, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

HEARINGS EXAMINER: Please be seated, sir, and your written statement -- you appear, as I understand, as a proponent. Therefore, Mr. Don MacIntyre, who is an attorney for the Department of Natural Resources, will conduct the cross-examination.

WITNESS: Thank you. First can I, your honorable chairman, just read part of the first page and a little bit in the center and towards the end? The reason is I've heard so many comments against this project, and I would just like for them to hear just a little bit of it that probably they didn't know before. I am a retired citizen of Great Falls and not obligated to anyone. May I do that, your honor?

HEARINGS EXAMINER: Well, I'm going to permit you, just limit it because we have a lot of people here that want to get through, and your testimony is written and will go to the board.

WITNESS: Yes, I'll just read the beginning and then the end.

HEARINGS EXAMINER: Yes, if you would, please.

Supplement to Written Statement

By Mr. Pistoria:

The title of my testimony is, "what has happened to our immigrant off-springs who made America great." It is hard to believe that anyone with a sane mind with all the unemployment and much needed tax revenue in Montana, and with only a population under 700,000, that a minority segment of our state population (who they are, I will mention later) can be against the Colstrip project as long as all of our state environmental and reclamation restrictions are adhered to, which the Montana Power Company and the other associated companies are required to comply with and have agreed to do.

A $750,000,000 expansion investment consisting of two 350 megawatt Colstrip generators 3 and 4 and two 500 kv transmission lines by private business have faith and a great foresight in the future economy of our state. Thank God this huge expenditure is not being made at the taxpayers expense. The average tax mill levy of 212 mills for the whole area that this project will cover from Colstrip to Hot Springs will derive a total of $31,800,000 in yearly taxes and approximately 70 percent of this amount will be for education or $22,260,000.

It will also employ approximately 1,800 workers during construction for a period of 6 to 8 years and 400 permanent employees thereafter.

I'm going to skip a paragraph there. As a son of Italian immigrant parents, I must speak up with harsh words regardless of those that may think that they are being offended to save America on the principle that our great nation was founded. There would have been no America today if it were not for our immigrants from whom all of us descended, be them Italians, German, Irish, English, Austrians, Swedes, and many other nationalities who couldn't even speak the language. They didn't come to America to destroy, but only for one purpose in mind, the type of freedom which they did not have in their homeland and wanted to live where, trust, honesty, and freedom of choice existed under our free tax base system.

They pushed carts, walked to school, walked to work, dug ditches, worked in the mines, farmed by hand, and even built hydroelectric dams, steam plants, and transmission lines to produce and transmit electricity. Also worked at all other crafts, all of which was their own choice. They worked hard, didn't have time to complain, and made the best of everything with little finance and were happy. No one wanted support at the taxpayers' expense. They had great pride and self-respect of their fellow man. They just built this great nation and for their own self-respecting future to show the whole world how it was done.

I might just add a paragraph. If you are not aware by now that the government at all levels is the tax dollar taker, not the producer. It is the individual and private business, now, you know.

Then I go on here and I back up some of my statements of all the professors that have testified against this, and I started to prepare this on March 11, 1975, and being it was too far from Great Falls at the time, I decided not to complete it; but since then, in the last few days, I decided to complete this testimony. This is one thing I'd just like to pass on here now. Now the Governor, Thomas Judge, and Lt. Governor William Christianson, helped to sponsor strict legislation governing the removing and usage of coal and all mining affecting all aspects of the environment in our state. This was passed by the legislature and signed into law by the Governor. It is probably the strictest regulation adopted by any state and set an example for all of our states. One, restrictions on the environment and emissions created by the burning of coal; reclaiming of the land after coal and other mineral removal; the Siting Act, determining location of the generating plants and transmission lines; creating the Department of Natural Resources to oversee that all these restrictions are adhered to, plus a percentage tax on the total investment of the project in order to administer this department and to hold hearings. I'm going to skip some more.

HEARINGS EXAMINER: Well, skip quite a bit more, will you, because we're going to get it all to the Board to hear on this.

Okay. The law is very plain; if all these requirements are met, these associated companies have agreed to meet all of these requirements and restrictions, why then should they be denied the privilege of constructing this project and why was the law adopted to meet these requirements in the first place.

Now I want to bring out, your honorable chairman, why our smelter was successful in Great Falls. I will try to explain why the Colstrip project should be allowed to be constructed as requested. As an example, in approximately 1906, there was the A.C.M. Company and the Montana Power Company being run mostly by immigrants, not off-springs. They had the foresight to build the Black Eagle Hydroelectric Power Plant and the smelter near Great Falls, Montana, to refine copper and zinc ore into metal which was shipped from Butte, Montana. To refine this ore, they built a 504 foot smoke stack to relieve the air from dangerous fumes and pollution. This, I believe, was more dangerous to human life and vegetation than what you will have at Colstrip.

In the ensuing years, the Smelter expanded, more hydroelectric power plants were built in this area and in 1910 two 100 kv steel tower transmission lines were built to Butte to furnish power for the Butte expansion. Now from 1906 to 1976, over this 70 year period, we saw the progress and growth of Great Falls and our state to what it is today.

During this 70 year period in the Great Falls area, if the pollution and environment was so dangerous, why are all of us living to be 80 to 90 years old, and why has the vegetation been so good and the raising of 40 to 50 bushels of wheat per acre right up to the smoke stack? With this experience, how could anyone question the results at Colstrip? I thank you, your honorable chairman.

HEARINGS EXAMINER: Okay. You may cross-examine, Mr. MacIntyre.

(THE WRITTEN DIRECT TESTIMONY OF MR. PAUL G. PISTORIA WAS DIRECTED TO BE INSERTED AT THIS POINT.)

[illegible]

March 16, 1976

2421 Central Avenue
Great Falls, Montana
March 11, 1975

Mr. Carl Davis, Chairman, Committee on Hearing
Department of Natural Resources Case, Colstrip 3 & 4 Expansion
Helena, Montana

WHAT HAS HAPPENED TO OUR "IMMIGRANT OFF-SPRINGS", WHO MADE AMERICA GREAT?

It is hard to believe that anyone with a SANE mind with all the unemployment and much needed Tax Revenue in Montana and with only a population under 700,000 that a minority segment of our state population (who they are, I will mention later) can be AGAINST the Colstrip project as long as all of our State Environmental & Reclamation restrictions are ADHERED to, which the Montana Power Company and the other associated companies ARE REQUIRED TO COMPLY WITH and have agreed to do.

A $750,000,000 expansion investment consisting of 2 - 350 MGW Colstrip Generators 3 & 4 and 2 - 500 KV Transmission Lines by private business have faith and a great foresight in the future economy of our State. Thank God, this huge expenditure is not being made at the taxpayers expense. The average tax mill levy of 212 mills for the whole area that this project will cover from Colstrip to Hot Springs will derive a total of $31,800,000 in yearly taxes and approximately 70% of this amount will be for education or $22,260,000. It will also employ approximately 1800 workers during construction for a period of 6 to 8 years and 400 permanent employees thereafter.

This tremendous accomplishment and investment by private business has never been made before in the history of our State, which confirms the fact that the free enterprise tax base system was the principle upon which our nation was founded. As Americans, how can we afford to ignore this venture? We can't have ½ Russia and ½ America in our nation. It must be ALL AMERICA as our forefathers saw fit 200 years ago. Are we going to allow our nation to be destroyed by these minorities? Our Bi-Centennial is coming up in 1976.

As a son of an Italian Immigrant Parents, I must speak up with harsh words regardless of those that may think that they are being offended to Save America on the principle that our Great Nation was founded. There would have been no America today if it were not for our immigrants from whom all of us decended, be them Italians, Germans, Irish, English, Austrians, Swedes and many other nationalities who couldn't even speak the language. They didn't come to America to destroy but, for only one purpose in mind - the type of freedom which they did not have in their homeland and wanted to live where trust, honesty and freedom of choice existed under our free enterprise tax base system.

They pushed carts, walked to school, walked to work, dug ditches, worked in the mines, farmed by hand and even built hydro-electric dams, steam plants and transmission lines to produce and transmit electricity. Also worked at all other crafts, all of which was their own choice. They worked hard, didn't have time to complain and made the best of everything with little finance and were happy. No one wanted support at the taxpayers expense. They had great pride and self respect of their fellow man. They just built this great nation and for their own self-respecting future to show the whole world how it was done.

The time is running out and it is of the essence that we speak up to preserve the principle upon which our Great Nation was founded, the free enterprise tax base system before it is too late. I have been working for sometime gathering this information to support my remarks. Now, the opportune time has come to set the record straight and expose those whom I shall call socialistic theorists and parasites of our American Society, dwelling essentially on the issues at hand against private business effecting the ecomomy of our whole State and more important jobs for the working men through their legislation and the environmentalists who do not know what in the HELL they are talking about.

These are the CULPRITS, if they honestly believe in America, instead of using their time and our tax dollar at the taxpayers expense doing everything possible without foundation or true facts. Why the Colstrip Project should not be built, they should do their utmost figuring out with constructive criticism why this project should be completed, complying with all the necessary required regulations and restrictions. That is what we all are concerned about.

If you are not aware by now that the Government at all levels is the tax dollar taker, not the producer. It is the individual and private business now you know.

(I) The following are the Professors at Missoula University and teachers in our schools who are paid with our tax dollars. (1) GEORGE Heliker, Professor - besides being against the entire Colstrip Project, he, in 1972 as a Con-Con delegate from Missoula, was the main sponsor of PUDs for the 1972 New Constitution but, was defeated soundly. Then, at the 1973 State Legislative Session Senate Committee Hearing on S.B. 280 - sponsored by Thiessen and McKeon establishing PUDs, he was the main speaker supporting this bill but this PUD Bill was again defeated. I do not have to dwell on what has since happened to KcKeon. (2) ARNOLD SILVERMAN, Professor - besides being against Colstrip Generators 3 & 4 Project, he in the 1973 State Legislative Session at the Coal Reclamation Hearing on Colstrip Generators 1 & 2, was one of the sponsors against the permit and advocated outlawing Colstrip Mining permanently but to his and opponents amazement, attending Professor Dr. S. L. Groff, State Geologist from Butte Tech made a monkey out of Silverman and his cohorts. Then, on August 8, 1973, at the College of Great Falls Seminar, he spoke against Colstrip Mining and still advocated outlawing strip mining at Colstrip. He was interrupted many times by the students and guests attending. (3) ROBERT MCKELVY, ROBERT BOHAC, WILLIAM R. DERRICK, RON ERICKSON AND JACK SOSEBEE, Professors - besides appearing at the State Department of Natural Resources Hearings in Missoula area against Colstrip Generators 3 & 4 Project, they appeared in Helena on April 22, 1973 and made an eleventh hour appeal at the State Board of Health against granting a permit to construct the first Generators 1 & 2 at Colstrip. (4) CLANCY GORDON & MALINDA SCHAILL, Professors, made sure they were heard speaking against the Colstrip 3 & 4 Generators Project at the hearings at the State Natural Resources Hearings in the Missoula area. MISS SCHAILL later made in a prepared statement in Missoula through the News Media, that it was a lot cheaper to ship coal out of our state to produce electrical energy to our bordering neighbors and derive more taxes than constructing at the Colstrip location Generators 3 & 4 and the 2 - 500 K.V. Transmission Lines to transmit electrical energy out of our state. I wonder from whom she received her information on costs and figures - was it Brezenev & Mao? Apparently, her conscience does not bother her because she is considered a professor. It wouldn't bother her to quote lies to our citizens. I am an engineer myself and I could come up with figures that substantiate that it is more advantageous to construct the Colstrip Project to help our State Economy as anticipated. We just can't allow our educators, paid at taxpayers expense, to destroy our thinking. (5) STANLEY GROSSMAN, Professor and his wife ARLENE appeared at the State Natural Resources Hearings in the Missoula Area against the Colstrip Project. He recently was the spokesman, representing the professors for higher salaries at the University stating we will be in trouble if this salary increase is not granted. What kind of trouble? The professors won't leave, they have too good a thing going for them teaching their doctrine to accomplish their goals. His wife ARLENE is just as indoctrinated. She is the one who boasted having petitions with 1025 signatures against the Colstrip Project, which was first started by the Northern Plains Resource Council, not the proponents as she or they would lead you to b elieve. That is how these people do their dirty work - they start something they cannot finish. Her signatures were acquired mostly from the professors, students, their friends, not from all walks of life as the proponents did. That is what is bothering her and associates. Also, imagine her raising $2300 through dinners and auctions, which she or they donated to help finance Northern Plains Resource Council to advertise their propaganda. Who is trying to fool who? (6) RICHARD SHERIDAN, appeared at the Department of Natural Resources Hearings in the Missoula Area against the Colstrip Project. (7) JAN KONIGSBERG, JOAN CHRISTOPHERSON, RON PERRIN, FRED RICE, CHRIS IMHOFF, Professors, RON WHEELER, Teacher at Sentinel High School, Missoula and COLLEEN DONNELLY, Student, appeared as a group at the Department of Natural Resources Hearings in the Missoula Area against the Colstrip Project. I must reveal the vicious comments and incredible behavior made by these 6 professors, 1 teacher, 1 student and others, who were amongst approximately 70 supporters of their New Montana Socialist Party (which they formed last fall). At a meeting held at the Union Hall in Missoula on Saturday, January 11, 1975, the subject of considerable discussion was just how their Socialist Party could best accomplish the task of Public takeover of the Montana Power Company.

They proposed several alternatives which would result in the most effective priorities in their venture such as ought to be, the people, not profit; agreed that neither the Tennessee Valley Authority (TVA) nor Bonneville Power Administration (BPA) are appropriate "Models" for the public takeover of the Montana Power Company. If we are going to talk in big terms for our Socialist Party to have a future, we should NOT be concerned just with Montana Power Company; whether it be "Nationalization" or Public Ownership or Municipalization of energy, it would involve the Public takeover of the Montana Power Company assets and the distribution of profits through Legislation. Finally, the membership felt that their Socialist Party by direct involvement, may fail...would be unwise. It would be more effective by running a slate of candidates for political office. (No doubt with their selection) apparently Jan Konigsberg and Joan Christopherson were the Biggies at their meeting. (8) E. W. PHEIFFER & MEYER CHESSIN, Professors.... On February 7, 1975 appeared in Spokane, Washington at Gonzaga University speaking against and criticizing the change to more efficient multiple warhead missiles in our surrounding area by MAFB in Great Falls, Montana (now attempting to brainwash our private school students too). We are capable of taking care of our own affairs without their stomping around the country using our tax dollars, selling our nation down the road to the Communists. Keep your DAMNED nose out of our own affairs, when we are satisfied and have no complaints on missiles being located in our surrounding area. You have been doing this for some time instead of teaching your normally assigned subjects at the University and minding your own business. After all, taxpayers are your real bosses. I question whether you are qualified or, are more of an authority on this subject than I am. Now, who takes your place teaching at the University? (9) THOMAS HOROBIK, Social Science Teacher at East Junior High, Great Falls, Montana appeared at 3 different Department of Natural Resources Hearings in Great Falls speaking against the Colstrip Project, plus having some of his students read prepared quotes on why the Colstrip Project should NOT be built. His behavior was unbecoming a teacher as he stated his outright hatred of the Montana Power Company. (10) WILLIAM F. THOMAS, Ecology Teacher at Great Falls High School with 8 or 9 of his students appearing at the Department of Natural Resources Hearing at the West Junior High in Great Falls, read prepared statements against the Colstrip Project. Then, on January 16, 1975, he and several of his Ecology students journeyed to Missoula by bus at the taxpayers expense to tour the Hoener-Waldorf Lineboard Plant at Frenchtown near Missoula. As they were entering the plant gate, many of the students had already made up their minds. One of the girls yelled out "ICK", then a short time later, she again repeated "ICK". The tour was arranged by the management with every courtesy possible even to furnishing them all with hard hats for safety sake. This is a disgrace and embarrassing for the citizens of Great Falls and our school system to have this kind of behavior and manners. Also, Thomas and the students attended two sessions with a pair of Missoula University Professors (One was RON ERICKSON) that lectured the students opposing the Hoerner-Waldorf Plant Expansion at Frenchtown. This is outrageous and, an insult to the intelligence of our society. The Deportment by the professors and students is rated as a complete failure.

NOTE: After preparing this much of my information, I was undecided as to whether I should present this material at your hearing at Bozeman in March, 1975 and didn't complete the summary.

But, after reading about the derogatory testimony against this project since January, 1976, then, on March 10, 1976, I felt that I should complete my summary for presentation to you.

(11) Recently, CLANCY GORDON, Professor at the University of Missoula again testified against the Colstrip project, thus stating the emissions from stack probably will permanently damage vegetation for 20 or 30 miles in the surrounding area and K. Ross Toole, History Professor, also testified against this project stating it will be the start of the Rip-Off of Montana. I can't see how either are qualified to make such statements.

Later I will make my views known as to why I feel that all the people that I have mentioned, who are against this project, have nothing to support their cause.

II - Now, Governor Thomas Judge and Lt. Governor William Christianson helped to sponsor strict legislation governoring the removing and usage of coal and all mining effecting all aspects of the environment in our State. This was passed by the Legislature and signed into law by the Governor. It is probably the strictest regulation adopted by any State and set an example for all of our states.

(1)Restrictions on the environment and emissions created by the burning of coal.

(2)Reclaiming of the land after coal and other mineral removal.

(3)The Siting Act - determining location of the Generating Plants and Transmission Lines.

(4)Creating the Department of Natural Resources to oversee that all these restrictions are adhered to, plus a percentage tax on the total investment of the project in order to administer this department and to hold hearings.

Gary Wicks, Director of this Department, has constantly been against this project and has even hired out of state attorneys to do everything possible to stop this project. Even the Governor in a round about way indicated he is not entirely for this project. The Lt. Governor has openly testified against this project too. They are now bucking this project and are going against the very law that they advocated adopting, thus, preventing this project from being constructed.

The law is very plain, if all these requirements are met and, these associated companies have agreed to meet all of these requirements and restrictions. Why then, should they be denied the privilege of constructing this project and why was the law adopted to meet these requirements in the first place?

Instead, it would seem that all who are against this project, would do everything possible to make sure these requirements are agreed upon, if so, then, why should this venture be stopped?

III. Dr. S. L. Groff, Geologist Director at Butte Tech, in his previous testimony for the construction of Colstrip 1 & 2, has proven that he does know what he was talking about because since then, Colstrip Generator #1 has proven that it meets all of the restrictions and then some.

Recently, Dr. Groff again testified for the construction of Colstrip 3 & 4. He has proven to be very knowledgeable in this field. How would anyone question his experience and so far his beliefs have been confirmed, more so than anyone else who is against this project.

There has been much mentioned favoring shipping coal out of State, regardless of whether the coal is used here or shipped out of the State. The reclaiming of the land will be the same. The problem would still be there, if there is one.

There also has been testimony against constructing the transmission lines. In my closing remarks, I will try to explain why the Colstrip Project should be allowed to be constructed as requested. As an example: In approximately 1906, there was the A.C.M. Company and the Montana Power Company being run mostly by immigrants not off-springs. They had the foresight to build the Black Eagle Hydro-Electric Power Plant and the Smelter near Great Falls, Montana, to refine copper and zinc ore into metal which was shipped from Butte, Montana. To refine this ore, they built a 504 foot smoke stack to relieve the area from dangerous fumes and pollution. This, I believe, was more dangerous to human life and vegetation than what you will have at Colstrip.

In the ensuing years, the Smelter expanded, more Hydro-Electric Power Plants were built in this area and in 1910 - 2 - 100 K.V. Steel Tower Transmission Lines were built to Butte, Montana to furnish power for the Butte mine expansion.

Now from 1906 to 1976 over this 70 year period, we saw the progress and the growth of Great Falls and our state to what it is today.

During this 70 year period in the Great Falls area, if the pollution and environment was so dangerous, why are all living to be 80 to 90 years old and why has the vegetation been so good and the raising of 40 to 50 bushel of wheat per acre right up to the smoke stack? With this experience, how could anyone question the results at Colstrip.

Thank God, our immigrants saw fit to do this, otherwise, none of us would be here today, and Thank God, none of you environmentalists were not around at that time.

Many are asking why the smoke stack is not smoking today. I always let them know, the environmentalists had something to do with its curtailment.

I think, with the experience here through the years, you are bound to have the same encouraging results at Colstrip.

This is the end of my testimony -- Thank you.

Sincerely yours,

Paul G. Pistoria

Paul G. Pistoria

2421 Central Avenue
Great Falls, Montana
March 11, 1976

IMPORTANT: This is an accurate fact sheet made up by myself, not propaganda & self-explanatory information obtainable from the State Board of Equalization in Helena, who operate on the State Statute Laws passed by our elected Legislators through the years. (Is public information).

I am not out to offend the intelligence of our citizens or our elected officials, who represent us, but, I believe now is the time, we, as citizens & our elected officials should pause a moment to think out toward the direction we have been moving, and reverse our thinking. Yes, there is a serious tax discrimination. As Americans, it wasn't intended that one type of business be favored over another. All businesses must pay their equal share. After all, we, the taxpayer, take on the burden from unnecessary favoritism.

NOTE: The private utilities do pay taxes on the highest assessed tax value. The individual property owner (you and I) and the standard private businesses are the second highest. The other businesses as shown, come under the other 8 different classes of assessed tax valuation down to 7% instead of our 30%. How many of us knew this before. Why this inequality? Our thoughts should be known now, while our Legislature is in session. Don't wait. Now is the time to speak up. Write or contact our elected legislators to have this situation corrected to relieve the tax burden on us.

This should be interesting to all of you. I understand the G.T.A.s voluntarily started going to a corporation operation instead of being affiliated & depending on their own membership, away from tax privileges. If this is so, they should be complimented for this venture in preserving our established American tax base system. This is a plus.

EXAMPLE- COMPARISON OF COUNTY TAXES THAT ARE PAID BY INDIVIDUAL PROPERTY OWNERS & DIFFERENT TYPES OF BUSINESS & HOW THE TAX IS DETERMINED. (IN FACT THERE ARE 10 DIFFERENT TAX STRUCTURES OR CLASSES) WHY?

(BY STATE LAW.)-USING $100 AS A MARKET VALUE	PRIVATE UTILITIES	INDIVIDUAL PROPERTY OWNER	R.E.A.S & TEL. CO-OPS	PUBLIC POWER	ALL OTHER TYPES OF BUSINESS
MARKET VALUE (BASED ON $100.00)	$100.00	$100.00	$100.00 BY FEDERAL LOANS AT 2% INT.	$100.00 BY ALL OUT FEDERAL GRANTS	(Normal Business) - (Farmer's Union) -(Co-ops)- (G.T.A.s) & (Banks-Savings & Loans) are assessed at approx. ½ of market value. Taxable class 30% of tax valuation on property & buildings as individuals & normal businesses but the (Farmer's Union) - (Co-ops) - (G.T.A.s) & even the (Banks - Savings & Loans by the 1957 Banker's Relief Act), all do have other lower tax class % from 30% down to 7% of tax valuation privileges or favoritism in different categories - (WHY?)
APPROXIMATE ASSESSED VALUE	LAW BASED ON 50% $50.00	LAW BASED ON 40% $40.00	LAW BASED ON 50% $50.00	NONE (ZERO)	
TAXABLE CLASS OR (TAXABLE VALUE % OF ASSESSED VALUATION)	(40%) x .40	(30%) .30	(7%) .07	NONE (ZERO)	
ACTUAL TAXABLE VALUE	= $20.00	= $12.00	= $3.50	NONE (ZERO)	
EXAMPLE- USING A 200 MILL TAX LEVY	200 MILLS — .200	200 MILLS- .200	200 MILLS- .200		
ACTUAL AMOUNT TAXES PAID	$4.00 $4-DOLLARS	$2.40 $2.40 DOLLARS	ONLY $0.70 70¢ - IS THIS FAIR?	NONE-(ZERO) IS THIS FAIR COMPETITION?	

EXAMPLE- COMPARISON OF STATE CORPORATE TAX (OR STATE INCOME TAX) & FEDERAL INCOME TAXES PAID BY (PRIVATE UTILITIES)-(R.E.A.S & TELEPHONE CO-OPS) & (PUBLIC POWER), BASED ON A $100.00 DOLLAR NET INCOME.

	PRIVATE UTILITIES	R.E.A.S & TEL. CO-OPS	PUBLIC POWER
STATE CORPORATE TAX OR (STATE INCOME TAX) ON $100. NET INCOME	IS 6¾% OF NET INCOME $100.00 0.0675 $6.75 — $6.75	NO TAX $100.00 0.00 $0.00 — $0.00	NO TAX $100.00 0.00 $0.00 — $0.00
FEDERAL INCOME TAX ON $100. NET INCOME	IS APPROX. 48% OF NET INCOME $100.00 .48 $48.00 $48.00	NO TAX $100.00 0.00 $0.00 — $0.00	NO TAX $100.00 0.00 $0.00 — $0.00
	TOTAL- $54.75	NONE- $00.00	NONE- $00.00

IT IS TIME FOR ALL OF US TO EVALUATE OUR THOUGHTS; DID WE KNOW THAT THIS TAX INEQUALITY HAD EXISTED BEFORE? — SAT-DEC. 30, 1972.- Paul G. Pistoria.

WHY DO WE, THE INDIVIDUALS AND RETIREES HAVE TO CARRY THE TAX BURDEN FOR THESE FAVORED ORGANIZATIONS?

EXAMINATION OF PAUL G. PISTORIA

Cross, by Department of Natural Resources and Conservation

By Mr. MacIntyre:

Q Mr. Pistoria, you are retired?

A That's right.

Q From what profession are you retired?

A I worked for the power company; I was with them 45 years.

Q And that's with the Montana Power Company?

A Pardon? That's right, continuously, and that's an achievement in itself. A lot of them would like to have that achievement.

Q For how many years have you been retired?

A March 1, 1972.

Q I take it the reason you are here testifying today is that you have worked for some time gathering information relative to Colstrip 3 and 4, and now you're taking the opportunity to set the record straight on facts relative to that project?

A I would say it's somewhat that. I did it on my own, that's right. I've followed and read all the papers, and that's where I got all this information, that's right.

Q In fact, that's your statement on page 2?

A Yes, that's right.

Q And this testimony was prepared originally March 11, 1975, but these facts are still yours and they're your statement today?

A Yes, up to where I finished it; it tells in there, if you'll read on.

Q Some of these facts that you have gathered indicate that a minority of the segment of the population in the state of

Montana is against the Colstrip projects; therefore, a majority of the people favor the projects. Is that correct?

A That's the way I feel, that's right.

Q You've taken a poll?

A Pardon?

Q Have you taken a poll?

A I haven't taken a poll, but all the people I've talked to, and wherever I'm at, I find that the majority of the people, and that's right.

Q Another one of these facts that you've taken time to accumulate is the fact that the proposed three quarter billion dollar project is two 350 megawatt generating stations and two 500 kv transmission lines?

A That's the total amount.

Q And that's the subject of this hearing today?

A I would say so, yes. That's fairly accurate, that amount, because I've been hearing about it and reading in the paper, and I just saw the other day where it was up $776,000,000.

Q And you also believe it's a fact that after the projects are completed that there will be at least 400 permanent employees as a result?

A I would say so and probably more. I think I'm very lenient.

Q Now as your result with your employment with the Montana Power Company, were you in their tax department?

A No, but I would say I've studied it, more or less, all of my life, and I was able to figure this out.

Q How -- go ahead.

A You go ahead and ask me how I figured this out.

Q What were the nature of your studies, this is a hobby or --

A How do I arrive at that tax?

Q No, no. You said you've studied it throughout your life. How have you studied it; is it something you've just undertaken?

A No, I've been familiar with this my whole life. I've lived in Great Falls my whole life, I've been under the circumstances. I've smelled the smoke stack my entire life.

Q Do you have a college degree relating to tax accounting?

A No, I don't.

Q At any time in your employment with Montana Power did you work in their tax department?

A No, but I've helped in finding information, but I've never worked entirely in the tax department, and I don't think you have to.

Q The exhibit on the last page was prepared --

A In 1971, that's right, by the state legislature.

Q 1972?

A '72, yes. Whatever it says there, it says there Saturday, December 3, 1972.

Q And have you completed one since then, or is this your final draft?

A This hasn't been changed.

Q And this is all your work?

A That's all my work, and I might say this to you for the record. This information I've worked with the Revenue Department here in Helena, and it states in there if you'll read it all. That's how I arrived at this little complex sheet.

You can even question it if you went to the -- it can be verified by going to the Revenue Department.

Q Is this the Department of Revenue's work, or is this your compilation?

A I just got the -- this is all my work. All I got from them was the valuation, the assessed valuation, the tax valuation, on the different categories of business.

MR. MACINTYRE: I have no further questions, except I would object at this time to the exhibits, the two newspaper articles attached on the back as incompetent, of no probative value. They constitute hearsay, the authors are not here to be cross-examined, and I would further object to the last exhibit as no proper foundation for this man to make these calculations, and also that they are incompetent and improper.

HEARINGS EXAMINER: Very well, your objection to the newspaper articles is sustained. We haven't permitted newspaper articles in this hearing to date, and so they won't go in. Your objection as to his own calculations is overruled, and that will go in. Very well, sir, you're excused.

(WITNESS EXCUSED).

MR. PETERSON: Mr. Davis, may I make a statement for the record relative to the service of statements for rebuttal witnesses?

HEARINGS EXAMINER: Let me excuse him first. I mean you're through with him, aren't you?

MR. PETERSON: Yes.

HEARINGS EXAMINER: Well, you're excused, sir.

WITNESS: Thank you.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Yes.

MR. PETERSON: May the record show at this time that we have served upon the Department of Natural Resources, the Northern Cheyenne Tribe, the Northern Plains Resource Council, and the Hearings Examiner rebuttal witness statements for the following witnesses: Kent Anderson, Cal Cummin, Don Gregg, Neil Woodley, Merrill Pack, Robert Logan, Don Olson, Anthony Colucci, Charles Gilder, Chadwick Martin, Bernard Goldhammer, William Coldiron, Robert Labrie. The balance of the statements of the witnesses will be mailed out of our offices tomorrow in order to comply with the order of the Hearings Examiner. We've also served with the statements Exhibits 236 to 240, Exhibit 275, and all of the exhibits mentioned in the witnesses' testimony.

HEARINGS EXAMINER: Now you served those on each one of the parties, I assume.

MR. PETERSON: Yes, sir.

HEARINGS EXAMINER: Very well. Thank you, Mr. Peterson.

MR. MACINTYRE: May I inquire?

HEARINGS EXAMINER: Yes.

MR. MACINTYRE: Mr. Peterson, with respect to Mr. Martin, is that mean that Mr. Carroll will not be testifying?

MR. PETERSON: No, I have a brief statement by Mr. Carroll on another subject matter. Mr. Martin was with ecological services, too.

HEARINGS EXAMINER: Very well. Mr. Hill?

DAVE HILL, JR., appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF MR. DAVE HILL, JR., WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

TESTIMONY TO THE DEPARTMENT OF NATURAL RESOURCES

COLSTRIP UNITS 3&4

DAVE HILL,JR
PRESIDENT-ELECT
ASSOCIATED STUDENTS UNIVERSITY OF MONTANA
March 16,1976

I am here today not only as a representative of the students of the University of Montana but also as a spokesman for those generations who will have to live with the social and environmental impacts of the Colstrip Units 3&4,should they be approved.

We,as University graduates are concerned about employment opportunities. It is indisputable that construction of the plants would initially require large numbers of workers. When over, manpower requirements would be relatively small. Call it the Boom-Bust cycle of employment.

With the expected life of the plants only 37 years the bust is inevitable. What happens to the revenue and to the people without jobs? A good economy is a stable economy.

If the coal is mined and then shipped from Montana for conversion to electrical power,the period of employment would be greatly extended as would the number of workers affected.

Three points most Montanans can concurr upon are: first, the state is obliged to help bail the nation out of an "energy crisis",though the extent of this obligation remains obscure and abstract; second, the coal controversy has created many antagonisms within the state; and third,coal developement, whether it reach minimum or maximum dimensions,will have many serious and permanent impacts on the land,air,water,and people of Montana.

The state's obligation includes extraction of part of our reserves in an as environmentally and socially responsible manner as possible. With the completion of Units 1&2 Montana will certainly be a net exporter of energy.

Having made a resonable and rational reponse the national energy demands placed upon our state any further generating unit construction concessions is unwarranted and unjustified.

The young people of the state do realize that there is an end in sight to the conspicuous energy consumption patterns of the nation's citizens,given the finite resources which we have to meet energy needs.

To reduce the exodus of University graduates out of the state we must solve the problems associated with providing a stable economic base and a quality environment. Colstrip Units 3&4 can provide solutions to neither of these conditions.

EXAMINATION OF DAVE HILL, JR.

Cross, by Applicants

By Mr. Ross:

Q Dave, how old are you?

A I'm 24.

Q When did you decide to testify in this hearing?

A When I first heard there was going to be public testimony.

Q And about how long ago was that?

A That was several months ago. It's been a matter of convenience for me to organize my schedule.

Q You state in the first paragraph of your statement that you're here as a representative of the students of the University of Montana, and also a spokesman for future generations. You don't purport, do you, to speak for all of the students of the University of Montana or future generations?

A I feel that I am speaking for a majority of them.

Q Well, as an old former president of the students at the University of Montana, I kind of know that a lot of times there aren't that many people that vote. What percentage of the students at the University of Montana voted for you?

A I believe it was about 15 percent.

Q Fifteen percent? I think that's better than I did. Did you take any poll of the university students to determine what their position is with regard to Colstrip 3 and 4?

A Not a scientific poll as you would have it. We have taken petitions and circulated them at one point during the Colstrip proceedings, and also my work in the past year has been at the student action center in which we deal with environmental issues, and I think that I've seen a good cross-section of students in this capacity.

Q These petitions that you circulated, were they petitions asking for opposition to Colstrip 3 and 4, or were they just petitions that said will you indicate whether you're for or against Colstrip 3 and 4?

A They were designed to indicate opposition to Colstrip.

Q Have you ever had a vote at central board with regard to Colstrip 3 and 4?

A Not to my knowledge.

Q Have you ever had anyone from Northern Plains Resource Council either meet with you or other members of the associated student body?

A In what capacity?

Q In any capacity?

A Yes.

Q What were those meetings, or discussions?

A The meetings have always been casual and on a friendship basis. I believe that the only business we've ever discussed was perhaps our assistance to them concerning an option we had at one point.

Q Have you ever assisted them financially or with projects to raise money?

A We have assisted them by selling tickets, but that was not officially with the student body; that was demonstrating our own personal interests.

Q Did they encourage you in any way to appear here and testify?

A No, they did not.

Q Have you ever had anyone from the Montana Power Company come and meet with you either formally or informally and discuss Colstrip 3 and 4?

A One time I met with an individual from the local office.

Q And what was his name?

A I do not recall.

Q Did you ask to meet with him, or did he ask to meet with you?

A He asked to meet with us on another issue, and we brought up Colstrip.

Q But you've never asked for anyone from the power company to come and explain their position on Colstrip 3 and 4?

A I believe in the beginning, in 1973, that President O'Connor was able to debate the issue up at the university center.

Q In your second paragraph, you say it is indisputable that construction of the plants would initially require large numbers of workers. Can I gather from that that you do agree that there would initially be some employment from Colstrip 3 and 4?

A I have assumed that from viewing similar jobs in Montana of that economic magnitude.

Q Don't you think that in addition to the actual jobs created at Colstrip, there will be secondary jobs such as jobs for university professors to study the area, jobs as a result of other businesses selling equipment to Colstrip 3 and 4?

A I believe that's a logical assumption.

Q You mention in your third paragraph that the expected life of the plants is only 37 years. Are you aware that that 37 year life is accounting purposes and not an actual life estimate for the plant?

A Yes.

Q You suggest that it's going to be a boom and bust cycle. Do you think that after Colstrip 3 and 4, after 37 years, that there will be no energy or other development in eastern Montana?

A That would be conjecture on my part.

Q Well, on what basis do you say it's going to be a boom and bust affair.

A Given the fact that they're finite resources and capital consumption allowance combined would by definition make that.

Q How finite are the resources?

A The coal resources?

Q Yes.

A Well, relative to our lifetime, probably inexhaustible, depending upon how far you want to dig.

Q Don't you think it's possible that if the coal resources are finite in our lifetime, that beyond that there may well be other energy technologies or other industries that could locate in eastern Montana?

A I'm sure there are other industries that could locate there.

Q You also state in that third paragraph, when you're talking about the boom and bust, you say what would happen to the revenues? Are you aware -- you're not suggesting, are you, that the tax revenues from the transmission lines, for example, that go to the local counties through which the transmission lines pass, you're not suggesting that those revenues would dry up, would you?

A No, I'm speaking of the revenues that are generated as a result of extraction of the mineral and the operating taxes, business taxes, that the corporation pays for maintaining the premise.

Q And you go on to say the people would be without jobs. I guess this still relates to after the 37 year accounting life. Are you aware that there have been representatives from labor, the IBEW, and the operating engineers that have testified in this hearing in favor of Colstrip 3 and 4 because they want those jobs now?

A I'm aware that they have testified to that.

Q What do you think these labor people should do now if Colstrip 3 and 4 isn't built, and they don't get that job?

A I believe they could use their energies in developing alternative economic situations and systems.

Q You think the IBEW and operating engineers could, you say, use their energies to develop alternate technologies?

A Not alternate technologies, but encourage alternate industries that are non-polluting.

Q Oh, is that going to provide a job for them now?

A Not initially.

Q Well, again I get back to my question; what do you expect these people to do then?

A Well, in my opinion they're sacrificing their short term monetary renewments for the long term health of the countryside.

Q And you don't think they should do that?

A No, I don't.

Q What do they do for their short term economic welfare now?

A I'm not certain.

Q You also say a good economy is a stable economy. Don't you think that sufficient electricity and other forms of energy are important to having a stable economy?

A Most certainly, but at what level?

Q You mention in your fourth paragraph about shipping the coal from Montana. What makes you think that if Colstrip units 3 and 4 are turned down and not allowed to be built in eastern Montana that the coal that would have been burned in units 3 and 4 will be shipped to somewhere in the northwest?

A I still think that the proximity to the northwest is such that it would deem it economically feasible to mine that coal.

Q Do you know of any specific proposals to ship the coal to the northwest in lieu of building a plant at Colstrip?

A Just the rail system is the only form of transportation that I'm aware of.

Q But you don't know of any specific proposal by a utility or a government agency or someone else to build a plant in the Pacific Northwest if Colstrip 3 and 4 is turned down and would ship Colstrip coal to the northwest?

A I don't imagine much plans have been drawn up yet.

Q Well, isn't it true then that when you talk about jobs as an alternative associated with the shipment of coal on the rails that those jobs are really illusory, and there is no assurance that those jobs may ever develop?

A I think the demand for the coal would justify the continued looking into the feasibility of developing the rail system.

Q But there's no guarantee that if Colstrip 3 and 4 is turned

down that there will be railroad jobs in lieu of the jobs at
Colstrip, is there?

A No.

Q Are you aware that there are other plants being built in the
Pacific Northwest which some of the applicants in Colstrip 3
and 4 are participating in?

A Yes.

Q And are you aware that there are other plants being constructed
in the northwest which some of the rural electric cooperatives
in Montana receive their power from?

A I'm aware of that.

Q You state that Colstrip will have many serious and permanent
impacts on land, air, and water. Are you aware that there are
both federal and state standards relating to air and water
that are designed to protect the health and welfare?

A Yes, but I don't think that they are set at a level that precludes any possibility of permanent damage.

Q And what basis do you have for that statement?

A I think there have been studies that are born out in testimony thus far that demonstrate that.

Q What studies?

A I would say the studies by Clancy Gordon, a University of
Montana professor, demonstrate that.

Q Are you aware that in the promulgation of both the state and
federal standards that there was much study and testimony from
other experts before the standards were set where they are to
protect the health and welfare?

A I'm sure that there was testimony to that effect.

Q And are you aware that initial test monitoring results on unit 1 show that unit 1's performance is well below both state and federal standards?

A I'm aware of that.

Q You mention on the second page of your statement that Montana will be a net exporter. Are you aware that the Montana Power Company has historically been the net importer of electricity in the range of about 20 percent of its needs? I'm asking about the Montana Power Company historically being an importer. Were you aware of that?

A No, I was not.

Q Do you own a car?

A Yes.

Q Wouldn't it be difficult if the state of Michigan took the position that they don't want to be a net exporter of automobiles?

A That would not affect me.

Q How about if other states decided they didn't want to export refrigerators, stoves, that sort of thing; would that affect you any?

A I'm sure it would.

Q You mention in the third paragraph on the second page that you see an end in sight to the conspicuous energy consumption. What do you mean by conspicuous energy consumption?

A The type of consumption that people display when they buy bigger cars and build bigger homes and use luxury appliances that are unnecessary and unessential to everyday life.

Q You're not putting in that category, are you, the use of energy for such things as sprinkler irrigation and that sort of thing, are you?

A I would not consider that a luxury.

Q Well, are you aware that sprinkler irrigation has made the demand for electricity increase sufficiently, or significantly, in the recent years and is projected to in future years?

A I'm aware that that's part of the increase.

Q You wouldn't suggest that we put a freeze on the use of electricity for sprinkler irrigation and that sort of thing, would you?

A Not in the least.

Q Finally, you say that to reduce the exodus of university graduates out of the state, we must solve the problems associated with providing a stable economic base. What is your proposal to provide a stable economic base in Montana and stop the out flow of people in Montana?

A I don't know that I'm necessarily in a qualified position to speak, but I certainly think that attempts could be made on the part of state government and current industry in Montana now to expand their searches for alternative economic systems that could be applied here that would have stable situations not inherently unstable due to seasonal or boom, bust type of employment.

Q Well, again I'll ask you what are the IBEW and the operating engineers and those type of people that have testified in this hearing who need the job now, if Colstrip 3 and 4 isn't built, isn't it likely that they're going to have to leave the state to find employment?

A I'm not in a position to say.

MR. ROSS: I have no further questions, thank you very much.

HEARINGS EXAMINER: Thank you very much, Mr. Hill.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Mr. and Mrs. Haviland?

JOHN AND GAIL HAVILAND, appearing as public witnesses, having been first duly sworn, jointly, upon their oath, both as to their written direct testimony and as to the oral testimony to follow, were examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF JOHN AND GAIL HAVILAND WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

TESTIMONY AGAINST COLSTRIP 3 AND 4

By John and Gail Haviland
Missoula, Montana
March 16, 1976

We oppose the construction of Colstrip 3 and 4 and their attendant transmission lines.

We find no assurance in claims by the five utilities involved in pushing through Colstrip 3 and 4 that the power plants will meet federal and state pollution standards. The standards are not enough to protect the Colstrip area from the damage of accumulated sulfur and fluoride compounds emitted by the power plants. A motion submitted by the Northern Plains Resource Council requesting a mistrial be declared in the conditional certification of Colstrip 3 and 4 by the state Board of Health states, "This conditional certification does not state that the facility as proposed will not violate, air and water quality standards. Instead this conditional certification proposed to allow construction to proceed while Colstrip Units 1 and 2 are monitored and tested and possibly modified." As Colstrip 3 and 4's closed comparisons, Colstrip 1 and 2 should be thoroughly observed--and a decision reached--before, not during, construction of Colstrip 3 and 4. Just as one cannot test for sharks by dabbing one's toe in the water, neither can one predict effects on the environment without thorough observation, a [illegible] served up by the Westinghouse report.

The Hoerner-Waldorf paper mill situated near Frenchtown, Montana, is in compliance with state and federal clean-air standards yet a University of Montana study released January 29, 1976, concluded that sulfur buildup in the vegetation around the mill is continuing. The study reported new needles on conifer trees near the paper mill had already accumulated "abnormal" amounts of sulfur in the first five months of 1975, this in spite of production cutbacks at the mill.

As has been previously testified to by Timothy W. Devitt, it is possible to design and operate a much more efficient emission control system than that planned for Colstrip. Devitt said the system proposed by the five utilities would have a guaranteed average sulfur dioxide control efficiency of about 40 per cent. This is in stark contrast to systems that can be built with a possible 90 per cent efficiency. There is no reason to settle for 40 per cent, when 90 per cent is within reach--still more reason for further study--and to not feed the environment to the utility sharks.

The power companies are out to make money. The faster they can shove through Colstrip 3 and 4, the sooner they'll be making money off electricity produced from Montana coal, and the less money they'll have to spend. If they can get it through now, they won't have to pay for research to develop quality planning that would result in 50 per cent less sulfur pollutants than their present plan; they won't have to pay for more costly emission control equipment, and they won't have to pay the higher [illegible] which would result from building the plants [illegible] instead of now. They won't have to pay. But the environment--and Montanans who exist in that environment--will.

The irony of Colstrip 3 and 4 is that the plants are not necessary. The plants are not needed to transmit electricity to satiate the West Coast's demand for power. They may have our energy, in its raw, untouched form, to do with as they please, beyond the boundaries of Montana. Shipping the coal out by rail would eliminate the degradation of the environment the Colstrip plants and their attendant transmission lines would cause. It would be cheaper--$10 a watt--and cleaner, no messy power plants spewing forth, and create as much jobs as Colstrip 3 and 4. And when the coal runs out in 37 years, Montana will not be faced with the impossible task of recycling four behemoth power plants and 430 miles of useless power lines.

Still, the companies involved in Colstrip 3 and 4 want the electricity generated in Montana, not shipped by rail. This attitude is not because of any concern for Montanan's rising power bill. If the electricity is generated at Colstrip, Montana consumers would not receive lower power bill. As it stands now, consumers on the coast pay a maximum of 1.56 cents per kilowatt-hour, while Montana consumers pay 2.45 cents per kilowatt-hour. All power generated by Colstrip 3 and 4 will go to the coast, further reducing their power bills.

The utilities's argument that Montana will need Colstrip's additional power when natural gas shortages occur does not stand up-- [illegible] out of Montana. Glenn Nogle, [illegible] superintendent of operations, said his utility wants Colstrip electricity to help [illegible] 1971 contract to [illegible] power to California.

We are also opposed to the Construction of Colstrip 3 and 4 because its resulting two 500,000 volt transmission lines would cut a permanent clear cut across western Montana. The path of the line will take it across Powell County where we were born and raised. One irony is railroad lines already exist along the proposed route and utility officials admit it would be cheaper to ship coal rather than electricity. Shipping the coal ~~the~~ by rail would also provide more permanent jobs for Montana than the temporary construction of Colstrip 3 and 4 and their transmission lines.

Even if the coal was transported just to Spokane and then burned, an additional 350 permanent people would be employed above the 95 operating the Colstrip generating plants.

But even though shipping coal would be cheaper, create more permanent jobs and do away with the environmental concerns over the proposed transmission lines, the utilities still want to build the lines. After the coal is mined and gone, at least the railroads will still be useful. A generating plant and transmission lines are worthless without the coal.

The environmental analysis of the transmission system was done by Westinghouse Electric Corp. It seems to follow that Westinghouse, a manufacturer of electrical appliances, would favor the power source so its new appliances would have plenty of power. For such an important thing as studying environmental impact, a company with less commercial interests would be more desirable.

The Westinghouse report said, "Environmental effects are mostly limited to the relatively brief construction period."

the report does not say the construction schedule for each line is separate and construction could last two years.

The report also said, "The effect on wildlife will be minor. . . wildlife access has been reduced by avoiding wildlands and paralleling existing lines wherever possible." But almost in the same breath we read ". . . impact on future devˣelopment is minimized by locating the route in remote areas on public lands." Where does wildlife exist but in such remote areas!

The transmission towers themselves are a major concern. The reliability of the lines are not known, but already one tower from Colstrip 1 and 2 has toppled. The towers preferred by the utilities are not self-supporting. The towers are supported by four guy wires. These wires pose a hazard; they are easy to run into at night or when chasing livestock on horseback. The opportunities for sabotage are enormous--imagine the havoc one man with a bolt cutter could cause.

Construction of the towers involves building access roads to every structure, clearing right-of-ways and leveling a space of approximately 3,500 square feet so that a crane, varying in size from 32 to 100 tons, can be used.

A total of 2,400 workers will be needed to construct these lines. This will [illegible] and must [illegible] for Montana. [illegible] will be hired. The International Brotherhood of Electrical Workers in Billings has said that its members are [illegible] employed in eastern Montana and almost fully employed in western Montana. [illegible] employment for electrical workers means much of the labor force will be imported from out of state. This estimates [illegible] per cent of the labor force will be imported from out of state. It is estimated 40 per cent of these men will bring their families with them. So Montana would not benefit even from the temporary jobs provided by the transmission lines. Most of the money would go to out of state workers who would provide little tax base and dump their children, for a year or so, in already struggling rural schools.

If Colstrip 3 and 4 are approved, Montana will be in for another boom and bust economy. The economy would temporarily benefit from the mining and burning of coal. But after the coal is gone, Montana's environment would suffer permanently from strip-mining, sulfur emissions, and transmission lines.

Our concern over Colstrip 3 and 4 extends statewide, yet we also have a very personal interest in its results. The transmission lines, if however unfortunately approved, would cross our families' private property. We know the country--we have lived, ranched and recreated there. Powell Country, particularly the Helmville valley, is a uniquely scenic area whose aesthetic value would be destroyed by 130 foot towers hovering overhead. It provides recreation for people from Helena, Missoula, Deer Lodge, Anaconda, and Butte, as evidenced by the vehicles seen near the Nevada Creek Reservoir and Brown's Lake. And the transmission lines will seriously endanger ranching in the community.

A Helmville resident's point of view follows, that of T. W. [illegible]lyns, our fellow [illegible]:

> "I am a landowner [illegible] whose property will be crossed by two [illegible] transmission lines if Colstrip 3 and 4 are approved.

I am bitterly opposed to a 300 foot wide strip, 1/2 mile long crossing my property and effectively cutting it in half.

I can now look forward to the damages and disruptions of a two year construction period. I will lose productive land and this decrease in usable land lowers the value of my property. Future ranching operations near and under these lines will be hampered and may be a hazard to human and animal life. The future use of my land will be limited and its value further decreased.

The aesthetic value of this beautiful valley has been badly damaged by clear cuts and logging roads defacing our mountains. Two huge, unsightly transmission lines would be the ultimate degradation."

#

EXAMINATION OF JOHN AND GAIL HAVILAND

Cross, by Applicants

By Mr. Peterson:

Q You're John and Gail Haviland and you reside in Missoula, Montana. What is your occupation, John?

A (Mr. Haviland) Student.

Q Student, at the university?

A (Mr. Haviland) Yes.

Q And, Gail, is that also your endeavor at the present?

A (Mrs. Haviland) No, I graduated last June; I now work at the Missoula Mercantile in the advertising department.

HEARINGS EXAMINER: I'm sorry, we'll have to let them answer separately because we don't get John's answers on the recorder so --

MR. PETERSON: Which one of you prepared the statement?

WITNESS: (Mrs. Haviland) We both did jointly. If you'd like, I could speak and if there are any questions that I have difficulty answering I can refer them to my husband.

MR. PETERSON: All right.

Q Have any one of you ever been a member of a labor union?

A (Mrs. Haviland) I haven't, but I believe my husband has.

Q Are you a member, John?

A (Mr. Haviland) I was a member of the United Steelworkers I think; that was for when I worked in a mine one summer.

Q Is that for summer employment only?

A (Mr. Haviland) Yes.

Q Are either one of you members of the Northern Plains Resource Council?

A (Mrs. Haviland) No.

Q Where did you secure the information that the International Brotherhood of Electrical Workers in Billings has its members fully employed in eastern Montana?

A (Mrs. Haviland) That was from the Westinghouse Report.

Q From the Westinghouse Report?

A (Mrs. Haviland) Yes, and also in that report it said that they were fully employed in eastern Montana and nearly fully employed in western Montana, and because of that, the Westinghouse Report estimated that 80 percent of people employed on the transmission line would be from out of state and 20 percent from in state.

Q You haven't had the opportunity to examine the statement of prepared testimony by Russell Williams, vice president and business agent for the IBEW in Montana, have you?

A (Mrs. Haviland) I have not read it, read the actual testimony; however, I read newspaper accounts of it.

Q Where did you receive the information that transmission towers pose a threat to reliability because one of the towers from Colstrip 1 and 2 has toppled.

A (Mrs. Haviland) That information was circulated by the Northern Plains Resource Council. It was sent to my father who is a landowner along the preferred route of the transmission lines.

Q Was he one of the landowners who received a letter from the Northern Plains Resource Council advising him about the proposed preferred route of the applicants in this case?

A (Mrs. Haviland) He was.

Q Prior to that time had he taken any active interest in the construction of Colstrip units 3 and 4?

A (Mrs. Haviland) Yes, we'd been aware of this for two years.

Q Was there any explanation given to your father as to why this tower failed?

A (Mrs. Haviland) No, we are very interested to know why.

Q Do you feel it's a design failure in the tower?

A (Mrs. Haviland) We feel it's possible because the preferred towers, at least for Colstrip 3 and 4, are not self-supporting. As we understand it, they will be supported by four guyed wires, and if any one of these guyed wires is for any reason severed, then that could cause the tower very conceivably to fall over, either from wind pressure or just from non-support.

Q Is there any transmission line presently crossing any of the land of your father-in-law?

A (Mrs. Haviland) It's my father, and it is not currently crossing it; however, approximately 13 miles from where we live there is a 230 kilovolt line that is crossing the land of state Senator John Manley who has previously testified. Now we are friends of his; I have babysat for his family, and I have observed how the transmission line has interfered with radio and TV transmission. I have observed how cattle and horses do not go near there. I personally do not like -- have heard, you know, rather loud noises from it.

Q That during rainstorms?

A (Mrs. Haviland) No, that was during summer.

Q And you heard crackling sounds from those lines during the time when the weather was warm and dry?

A (Mrs. Haviland) More of a buzzing, a crackling; it's hard for me to define between the two sounds.

Q Have you spoken with any other neighbor other than Senator Manley relative to the location of that 230 kv line?

A (Mrs. Haviland) Yes, I have. I have numerous relatives in the area whose lands will be affected.

Q That line is presently passing their ranch?

A (Mrs. Haviland) Yes, it is. I have my uncle's ranch, Mr. C. N. Mannix, who on a correspondence between Geotronics and Einar Greve was listed as number 318; my father's was 321; my husband's uncle, Frank Potts, was 330, and my grandmother's, Louise Mannix, was 357. I also have Ralph Mannix, Ben Mannix, Walter Mannix, and Francis Mannix's ranches will also be passed; they are cousins.

Q Is you basic objection to the construction of Colstrip units 3 and 4 because of the transmission line location?

A (Mrs. Haviland) I have two objections. The first is I don't feel that Colstrip 3 and 4 are necessary, and the second objection would be due to the transmission lines.

Q Have you made a study on the needs of the applicants in this proceeding relative to the necessity of the generation units?

A (Mrs. Haviland) I've read the Westinghouse Report; I've read newspaper accounts of the proceedings.

Q Do any of your relatives sprinkle irrigate?

A (Mrs. Haviland) Not at the present, but they have been considering it, notably my father.

Q What would they use to pump the water, diesel fuel?

A (Mrs. Haviland) I'm not really well acquainted with the system.

Q I see.

A (Mrs. Haviland) But I understand that it is two to three times more effective than flood irrigating which is presently used.

Q Do you really believe that the removal of sulfur dioxide, the efficiency of removal of sulfur dioxide from the proposed units will not exceed 40 percent?

A (Mrs. Haviland) No, this is something that I read that another person, I believe it's Timothy Devitt, has testified to. He is an Oregon consultant, and he testified that it is possible to build a plant that would be 90 percent effective while he says that the plans you have for Colstrip 3 and 4 would be only 40 percent effective.

Q Do you know the basis on which he made that statement?

A (Mrs. Haviland) No, I do not.

MR. PETERSON: Well, I have no further questions, Mr. Davis.

HEARINGS EXAMINER: Do you have anything further? Very well, thank you very much for appearing.

(WITNESSES EXCUSED)

HEARINGS EXAMINER: Mr. Torgrimson. Do you have his statement, Mr. Peterson?

MR. PETERSON: Lee Torgrimson?

HEARINGS EXAMINER: Yes.

LEE A. TORGRIMSON, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF MR. LEE A. TORGRIMSON WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

I AM LEE A. TORGRIMSON OF RT. 5, MISSOULA, MONTANA. I'M EMPLOYED BY BURLINGTON NORTHERN AS A BRAKEMAN AND CURRENTLY AS AN ENGINEER TRAINEE.

AS A RAILROADER I'M INTERESTED IN THE JOBS CREATED WITH UNIT COAL TRAINS. BURLINGTON NORTHERN HAS PROJECTED THAT 246 NEW JOBS WOULD BE CREATED IF UNIT COAL TRAINS WERE IMPLEMENTED TO HAUL COAL TO THE WEST, INSTEAD OF BQRNING COAL AT COLSTRIP. THESE NEW JOBS WOULD HAVE AN ANNUAL PAYROLL OF ABOUT 3.6 MILLION DOLLARS. WITH THE MULTIPLIER EFFECT OF 1.7, THIS WOULD MEAN QUITE ALOT TO MONTANA'S LONG TERM ECONOMY WITHOUT CREATING A BURDEN ON ANY COMMUNITY. ALSO IT IS SAFE TO SAY THAT ALL OR MOST OF THESE NEWLY EMPLOYED WOULD BE RESIDENT MONTANANS. IF COLSTRIP 3 and 4 ARE BUILT ONE CAN BE ASSURED THAT THIS WOULD NOT BE THE CASE. THE NEW EMPLOYMENT WOULD CREATE NEW REVENUE FOR THE STATE, COUNTY AND LOCAL GOVERNMENTS WITHOUT CREATING UNDUE BURDENS ON THOSE TAX BASES.

MY PRIMARY CONCERN IS AS A MONTANAN AND OF THE ADVERSE SOCIAL AND ENVIRONMENTAL IMPACT UPON OUR BEAUTIFUL STATE. SHIPPING COAL BY RAIL WE EXPORT MANY OF THE SOCIAL AND ENVIRONMENTAL SIDE EFFECTS OF COAL-ELECTRIC GENERATION AND TRANSMISSION.

IN MY 34 YEARS AS A MONTANAN I'VE SEEN PROBABLY THE MOST DRASTIC CHANGES MONTANA HAS EXPERIENCED IN THIS [illegible] [illegible]. IN MY [illegible] MOST OF IT HAS NOT BEEN [illegible] [illegible]. [illegible] [illegible] IS THE ONLY WAY MONTANA CAN [illegible] [illegible]

THAT MONTANA HAS EXPERIENCED HAS CERTAINLY TAKEN ITS TOLL OF OUR ABUNDANT RESOURCES WHICH INCLUDES OUR NATURAL BEAUTY. OUR ENTEGRITY HAS BEEN CHALLENGED THROUGHOUT THE YEARS BY THOSE WHO TAKE AND TAKE AND GIVE LITTLE IN RETURN.

SOME FEW YEARS AGO A MANAGER FOR THEN WALDORF-HOERNER PULP PLANT IN MISSOULA STATED," WE DO NOT POLLUTE," REFERING TO THE PULP AND PAPER PLANT. WELL, ANYONE WHO HAS BEEN TO MISSOULA KNOWS BETTER THAN THAT. SOME INDUSTRIES IN BILLINGS, HELENA, BUTTE, ANACONDA, MISSOULA, COLUMBIA FALLS, TO MENTION A FEW, ARE GOOD EXAMPLES OF CORPORATE IRRESPONSIBILITY TO MONTANA'S LAND, AIR, WATER AND MOST IMPORTANT TO ITS PEOPLE.

SOME OF US HERE REMEMBER MONTANA'S 43rd LEGISLATURE WHERE MUCH OF MONTANA'S ENVIRONMENTAL LEGISLATION WAS ENACTED. I PREFER TO CALL IT MONTANA'S INTEGRITY LEGISLATION. MONTANA POWER COMPANY, THE RAILROADS OF MONTANA, THE ANACONDA COPPER COMPANY, HOERNER-WALDORF, ST.REGIS PAPER COMPANY, AND MANY OTHERS WERE WELL REPRESENTED. THEY FOUGHT OUR INTEGRITY. THEY FOUGHT THE LEGISLATION THAT GAVE MONTANAN'S THE RIGHT TO DISCIPLINE THOSE WHO FOULED OUR LAND, AIR, AND WATER. THESE LARGE COMPANIES LOBBYING AGAINST SUCH LEGISLATION; IS THAT A PICTURE OF RESPONSIBILITY? I SAY NO!

I FEEL THAT THE REAL ISSUE HERE IS WHETHER MONTANAN'S WILL CONTROL MONTANA OR WILL WE LET THE CORPORATE GIANTS, THE LABOR UNIONS, OR THE FEDERAL GOVERNMENT DICTATE TO US WHAT IS GOOD OR WHAT IS BAD FOR MONTANA. I DON'T LIKE THE PAST RECORD OF THE LABOR UNIONS, THE CORPORATIONS, OR THE FEDERAL GOVERNMENT, AND THAT, IS WHAT WE MUST GO BY IN DETERMINING THE FUTURE OF MONTANA, NOT THE SAME OLD IDLE PROMISES WE'VE HEARD FOR SO LONG.

THE GREED OF OUR UNDISCIPLINED SOCIETY CAUSED THE DEMISE OF ~~OUR~~ THE MONTANA INDIANS; THE GREED OF OUR UNDISCIPLINED SOCIETY NOW SEEKS THE DEMISE OF THE MONTANAN IN MONTANA. WILL WE BE CONQUERED BY THOSE WHO HAVE NO RESPECT FOR THE LAND, THE AIR, THE WATER OR THE INTEGRITY OF THE PEOPLE WHO INHABIT THAT LAND, THE PEOPLE THAT USE THE LAND, AIR, AND WATER FOR THEIR VERY EXISTANCE, THEIR LIVES, NOT THEIR GREED.

COLSTRIP GENERATING PLANTS 3 & 4 ARE EXAMPLES OF THE TAKERS TAKING AND GIVEING LITTLE IN RETURN. WE MUST NOW STAND UP AND SAY NO, YOURE NOT GOOD FOR MONTANA. I STAND OPPOSED TO COLSTRIP GENERATING PLANTS 3 & 4.

EXAMINATION OF LEE A. TORGRIMSON

Cross, by Applicants

By Mr. Peterson:

Q You are Lee Torgrimson of Missoula, Montana?

A Yes.

Q And an employee of the Burlington Northern?

A Yes.

Q And how long have you been so employed?

A About 10 years.

Q Are you a member of the Northern Plains Resource Council?

A No.

Q Were you asked to appear here today?

A No.

Q What is the reason or the motivation under which you attend these hearings at this time?

A Well, I feel that Montana has taken the short end of the stick for about 100 years, and it's about time the people had a voice in determining the future of this state; and I think this is one of the ways to do it.

Q Mr. Torgrimson, are you in favor or against strip mining of coal in the Fort Union-Basin area?

A Considering the energy alternatives at this point, I think we'd have to mine the coal; however, I don't think our government is doing a very good job in developing alternative sources of energy, such as solar, wind, etc.

Q Have you been to the Colstrip area?

A No, I haven't.

Q Do you have a family, sir?

A Yes, I do.

Q Were you born and raised in Missoula?

A Yes. The memories I have of Missoula are pretty fond until organizations such as Hoerner-Waldorf entered the picture.

Q How is that plant operating at the present time?

A Smelly.

Q Do you feel that the Hoerner-Waldorf plant operates, or has operated, in violation of the air pollution standards of this state?

A Absolutely.

Q And the same would be true of Anaconda Copper Mining Company's smelter in Anaconda?

A They have in the past, yes, I'm sure; Stauffer Chemical,Visarco, Corette plant, Columbia Falls, I believe they've all told us at one time or another that they'll clean it up, and it has taken the people to pass legislation to discipline these organizations into complying.

Q Well, you put a lot of emphasis on complying; do I understand that to mean that if these industries comply with the federal and state ambient air quality standards and new source performance standards, then that would satisfy one of your objections?

A As an alternative, yes. I feel that --

Q And you feel, though, that these plants, Colstrip 3 and 4, should comply with the standards?

A Yes, if they're built. I feel they should not be built, though, because of unit coal train means of transporting coal to use areas.

Q I understand that. All right, you want to go to the load centers?

A Absolutely.

Q And under your theory then, we would be shipping coal from the Fort Union-Basin area in which direction?

A There are proposals to ship coal to the west at this time?

Q There are?

A By Burlington Northern, yes.

Q And to what plant?

A I don't know for sure, but I think it's a plant that is being built in the Portland area.

Q Boardman?

A I really don't know.

Q Do you know whether or not that shipping of that coal is Montana coal or Wyoming coal?

A I believe it's Montana coal.

Q It is?

A I don't know for sure, though. You'd have to talk to Burlington Northern about that.

Q Do you know of any plans to construct plants in the northwest, coal generating plants in the northwest, and supply them with coal out of the Colstrip area?

A There are some proposals; I've heard it from the Spokane area, the Seattle area, the Portland area that have been, as you say, proposed.

Q Has a utility taken that step, do you know, any utility?

A Not publicly, but I imagine it's in the drawing stages.

Q How would you feel if we substituted these thermal plants with nuclear plants?

A I don't think that's a viable substitution.

Q You don't think that's a viable alternative?

A Alternative, no.

Q Why not?

A Because of the environmental side effects, but I think there are, like I say, other solutions to the problem.

Q Solar?

A Solar for one.

Q Wind?

A Wind.

Q Geothermal?

A Possibly.

Q Do you know or have you made any study relative to the state of the technology of any of those last three alternatives?

A Very little; I do know, however, it's a matter of investing resources, in other words capital, into finding out the technological reasons why or why they can't be used, whereas coal is pretty easy to burn; it doesn't take a hell of a lot of technology compared to solar, geothermal, etc.

Q What is your educational background, Mr. Torgrimson?

A I have approximately three years of college at the University of Montana.

Q Majoring in what area?

A Business.

MR. PETERSON: Okay. I have nothing further, Mr. Davis, thank you.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Mr. Sargent?

LEONARD R. SARGENT, appearing as a public witness, having been first duly sworn upon his oath, was examined and testified as follows:

HEARINGS EXAMINER: If you'd state your name, sir, and as I understand it, you're not going to use your written statement; you just want to make an oral statement?

WITNESS: That is true, sir.

HEARINGS EXAMINER: Very well, if you'll state your name and address and then go ahead.

MR. BELLINGHAM: I have a written statement here.

WITNESS: I would like to make an oral one which will follow that only fairly closely. I wrote that a week ago when I had flu. I think I can do better.

Oral Statement

I'm Leonard R. Sargent, a rancher; I live in Corwin Springs. I've operated the ranch for 16 years. I'm on the county planning board, and I'm president of the stop Allenspur Dam Committee. In the past I've lived in Virginia, so I'm fairly aware of the prosperity that coal has brought to the Appalachia area. I've also lived in southern California and Florida, visited the world where people don't look so well off either.

I started out, I've been studying this thing for a couple of years anyway, and I started out listing reasons why I am against Colstrip 3 and 4. I've got 38 reasons, six inches of files; I'm sure you'll be glad to know that I'm only going to stress four of those.

The first one is that I feel that Montana Power has not always given a fair and true point of view. I'm basing this on a number of points. I'd like to make several of them. Mr. McElwain, according to a newspaper article, said that a 30 percent tax on coal would increase the cost to the consumer by 30 percent. That's obviously asinine; I'm sure Mr. McElwain knows that. Incidentally, fertilizer doubled, fence wire doubled, and cattle went down by half. I remember reading that Montana Power stated that they had no thoughts about 3 and 4 several months after they already had an agreement with some other power companies to construct 3 and 4. On an EIS that I've had quoted to me on the Dillon to Clyde Park line, they claim that Big Sky projects a use of electricity greater than Bozeman, Manhattan, and Belgrade put together. Considering the fact that they're barely afloat and just had to make another contribution to keep going, that seems a little wild.

I feel strongly that the export only policy which was more or less accepted by this adminstration in the state, and also by the people of the state, is the way to go.

Point two, I'm dubious that the power is really needed. The Department of Natural Resources says it isn't. I got my last year book for the Encyclopedia Brittanica, and I quote, "Consummation of electricity energy continued to rise in most countries during '74, but at a rate well below the previous mean of 7.3 percent a year. The increase over 1973 was nil in the United States."

Point number three, Montana Power, Montana Power's partners, power companies all over the country, energy consortiums, local and national politicians, say we must choose between mine-mouth industry and jobs or our heritage and a clean environment. An example of that type of fraudulent thinking, a number of years ago the Owl Drug Store had found themselves with about a million eggs they couldn't sell; they were trying to have their drug store accountants, drug store people, say would you like one or two eggs, would you like an egg in your milkshake. The answer was always, no. They rewarded one of their workers $50,000 for the idea that the drug store clerk would say would you have one or two eggs in your milkshake. They got rid of the eggs'cause people couldn't think of a third alternative,which was neither.

This same mine-mouth industry and jobs or our heritage and clean environment is the same type of fraudulent presentation. We can have both; there's no question, but what we can have both, and I think this country is too great to sacrifice one for the other. Let's work for both.

The export only is the way we do both. If we do that, we have jobs, and it's been stated that the railroads will furnish more jobs by exporting than the power company will furnish by working in those plants; and at the same time, we will help the nation's energy crisis, save energy since it costs more to ship the power, I mean it costs more energy to ship the power than it does to ship the coal. I've read statistics that you ship power from here to Minneapolis, say, you waste 30 percent of the energy. You ship the coal, you waste a much smaller percent of energy, hardly any, as a matter of fact. Also, this means that if we develop our railroads, furnish jobs that way, the jobs will be spread out over the whole country instead of in highly impacted small areas. It also means that when the coal runs out, or when we think of a -- develop a better way to create energy, we will have a good railroad system which we will continue to need.

Point four, we've had a threat of air pollution, which certainly 3 and 4 might well add to; we've had a threat of water pollution, which certainly might be added to by 3 and 4; we're now also threatened with political pollution. It wasn't too many years ago that three or four, three companies I think, in Montana pretty much ran Montana. What they wanted, they got. There are stories of industry lobbyists sitting in this balcony signaling to the representatives this way as to how they wanted them to vote. As I understand it, a man closely connected with Montana Power was one of those lobbyists.

Granting approval for 3 and 4 will release a deluge of companies that will come after; they are sort of waiting in the wings. One large one isn't waiting in the wings; it's already trying to discredit Montana's water laws. They have been guilty of bribery in foreign countries, according to the papers; they have been guilty of illegal political contributions. These companies make Montana Power and some of the others look like the corner grocery store. I think we'll be going back to an era that would be even worse than the one that we had here years ago. Recently there's been a pretty good balance. I volunteered to lobby here during the last session, and we won some and the power companies and so forth won some, and it was pretty even. It should stay that way; both sides have something to offer, both sides have something to say.

You might think that well, the state of Montana can resist this sort of thing. Well, if we can't even keep our Workmen's Compensation thing on the up and up, and if one of the lawyers prosecuting the people who are in the wrong there can't even keep from breaking the law long enough to finish the case, I'm afraid Montana is going to be just as susceptible as a number of foreign countries and a number of other states.

So for those reasons, and that leaves 34 more of them, I strongly urge that the request for 3 and 4 be turned down.

HEARINGS EXAMINER: Thank you. Mr. Bellingham, you may cross-examine.

EXAMINATION OF LEONARD R. SARGENT

Cross, by Applicants

By Mr. Bellingham:

Q Mr. Sargent, I think I've only got a question or two. You indicate that we should transport coal that would be utilized for 3 and 4 to another generating unit, presumably located out of the state; isn't that your theory on it?

A Yes.

Q Well, do you have any assurance that that would be done in the event that 3 and 4 was turned down?

A Have you any assurance that it wouldn't? But we're already shipping coal to companies outside of the state, Minneapolis, I think.

Q Yes, to the east. Do you have any assurance that the coal that is earmarked for 3 and 4 would go to the Northwest to any generating unit out there?

A No, but I'm sure that if 3 and 4 were not approved, and more power were needed, that it would be.

Q You haven't made any study of that, have you, yourself?

A No, I don't see how anyone could at the moment.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Thank you, sir.

WITNESS: I left out one point. May I continue?

HEARINGS EXAMINER: Yes, sir.

Supplement to Oral Statement

As president of the Allenspur Dam, I want to put in my plug here. It is true that Montana Power is against building a dam at Allenspur. But it is also true that every time another industry starts using Yellowstone water, the inevitability of Allenspur Dam becomes more liable.

I'd also like to comment on Montana Power's stressing of water for agriculture for sprinkler systems. I happen to do my own irrigating, and it's hard work; I use flood irrigating system. I'm not sure that Montana Power isn't using the same technique they used when they gave away all those farm lights in order to then sell electricity so that every farmer who has one has to pull all his curtains so that the crook can work in a good light while the farmer is inside watching TV. I'm not at all sure that sprinkler irrigation in many cases is all that good. I think I do a pretty good job. You hear facts that you use x amount of water in the sprinkler system, much less than y amount of water in flood irrigation. That doesn't count the fact that the water that I waste is used by my neighbors subirrigating. Some of it goes back into the stream and is again used by some of my neighbors. If you use a sprinkler system, none of the water benefits anybody, and a great deal is wasted by evaporation. In fact, in Arizona I believe it is illegal to sprinkler irrigate in some areas in the daytime because of the vast loss through evaporation. I would think it would be very worthwhile to make a more thorough study there as to the amount of water used, particularly as I'm sure the electrical costs will increase, and it seems perfectly possible that it will reach a point where it's no longer economical to use a sprinkler system; and that is particularly brought out by the fact that the more water you use for sprinkler systems, the more water you have to use for creating power, and that uses water in two ways. There obviously is not going to be enough water.

HEARINGS EXAMINER: Very well, thank you, sir.

MR. BELLINGHAM: I have just one further question.

HEARINGS EXAMINER: Oh, go ahead.

CONTINUATION OF EXAMINATION OF LEONARD R. SARGENT

Cross, by Applicants

By Mr. Bellingham (continuing):

Q Are you aware of the fact that Montana Power has taken a position against the Allenspur Dam?

A I am, and I'm very grateful to that.

HEARINGS EXAMINER: Very well, thank you, sir.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Mr. Tomlinson? Do you have a written statement or oral testimony?

WITNESS: My written statement already went through.

HEARINGS EXAMINER: Are you a proponent or opponent?

WITNESS: Opponent.

HEARINGS EXAMINER: Opponent. Very well.

BILL TOMLINSON, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

HEARINGS EXAMINER: Do you have an extra copy with you, or have you served them all?

WITNESS: I think I have another copy, but I believe everyone has received copies.

HEARINGS EXAMINER: Well, you go right ahead.

WITNESS: There was a problem, I might point out, in the beginning.

HEARINGS EXAMINER: Yes, go ahead, Mr. Tomlinson.

WITNESS: That the two attachments were, in fact, not attached to the printed statement, and they should be entered into the record together.

HEARINGS EXAMINER: Very well. You may cross-examine, Mr. Ross.

(THE WRITTEN DIRECT TESTIMONY OF MR. BILL TOMLINSON WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

THE MONTANA WILDERNESS ASSOCIATION
Box 84
Bozeman, Montana 59715

My name is Bill Tomlinson of Missoula, Montana and I have been authorized by the President of the Montana Wilderness Association (MWA), Mr. Tom Horobik, to represent the MWA in oppostion to the proposed Colstrip 3 & 4 electrical generating and transmission project at the Board of Natural Resources and Conservation Hearing on March 16, 1976.

The MWA has approximately 800 members and determines policy and positions on issues by means of a member-elected Council of twenty (20) persons which include the three officers. On December 8, 1974 the MWA membership approved a resolution in opposition to Colstrip 3 & 4 at the annual meeting in Missoula. A copy of that resolution is enclosed (Resolution # 6). This resolution deals with the critical issue of minimal impact as interpreted in the Montana Major Facility Siting Act. We are also very much concerned about the central question of NEED. There simply is no demonstrated need for the massive 1400 MW facilities at Colstrip or any other location in Montana since approximately 70% of the power will be shipped out to the West Coast load centers. Interpretation of need must be at least partly based on social equity considerations. Those responsible for energy demand must be made to pay the social, economic and environmental costs of their consumption. For this reason the MWA strongly supports the principle of load center generation as opposed to mine-mouth generation as proposed by the applicants in this case.

The MWA stands for some very important purposes which are enumerated in the enclosed copy of our Constitution and Bylaws. The objectives of the MWA as contained in ARTICLE I Section 3 (B), (d) and (e) are particularly relevant as the foundation of the above-referenced resolution #6.

Further action in regard to Colstrip 3 & 4 was taken by the MWA Council at the quarterly Council meeting in Helena on January 24, 1976. The Council unanimously passed a motion authorizing MWA to oppose Colstrip 3 & 4 as a public party witness at the Board of Natural Resources & Conservation hearing.

We have appreciated the opportunity to present this statement and have the utmost confidence in the ability of the Board to weigh the evidence before it in arriving at a sound decision for the future of our State.

RESOLUTION 6

OPPOSITION TO COLSTRIP 3 & 4

Whereas; the Montana Utility Siting Act states that: "... it is necessary to ensure that the location...of power or energy conversion facilities will produce minimal adverse effects on the environment and upon the citizens of the states."

Whereas; the Montana Wilderness Association believes that the building of Units 3 & 4 (1400MW) at Colstrip for energy export to the West Coast is not minimal impact on the environment or upon the citizens of Montana,

Whereas; a rapid influx of thousands of people into a rural agricultural community with few social services is not minimal impact,

Whereas; the use of eastern Montana's scarce water to subsidize the water-rich Pacific Northwest is not minimal impact,

Whereas; five hundred miles of twin 500kv (EHV) transmission lines across the state is not minimal impact,

Whereas; the daily emissions from the power plants will violate the United States Clean Air Act which forbids significant degradation of clean air, such as we still have in eastern Montana,

Whereas; the Montana Wilderness Association firmly believes that if the plants must be built load center generation is the only feasible alternative to insure a more equitable distribution of external costs and to prevent the industrialization of eastern Montana,

Be it Therefore resolved: that the Montana Wilderness Association is in official opposition to the plans of the Montana Power Company and four other West Coast utilities to construct Units 3 & 4 at Colstrip.

Be it further resolved that a copy of this resolution shall be transmitted to the Governor, the Director of the Department of Natural Resources and Conservation and to each member of the Board of Natural Resources and Conservation urging that the permit for a certificate of public need and environmental compatibility for Units 3 and 4 be denied.

RESOLUTION 7

FOREST SERVICE SPECIAL USE PERMITS

Whereas; large-scale recreation development causes serious direct and secondary effects such as large influxes of population into semi-primitive environments, uncontrolled parasitic subdivision and strip development, water pollution, loss of wildlife habitat and destruction of scenic beauty, open space, solitude and other wilderness values,

Whereas; recreation development with attendent downhill ski facilities and second homes represents an unreasonable waste of scarce energy and natural resources without satisfying ligitimate housing needs,

Whereas; this type of development has far-reaching effects on the rate, type and distribution of growth in Montana,

Whereas; long-range goals concerning growth, land use and the future of Montana have not as yet been determined by the citizens of this state,

Whereas; the promotion of large-scale recreation developments is largely based on the attraction and use of adjacent public lands,

Whereas; the success of such developments is largely dependent on the willingness of the Forest Service to subsidize the private developer by means of the special use permit,

Whereas; such subsidies are not merely monetary but also result in the loss of wildland values which are borne by the public at large upon issuance of the special use permit,

Whereas; the Forest Service has a public trust responsibility to guard against inappropriate private land development which may infringe upon public land values.

Be it therefore resolved; that the Montana Wilderness Association as a matter of policy opposes the issuance of any USFS special use permit when such permit will be used for the promotion and/or development of private lands which are contiguous or in proximity to public lands.

Be it further resolved; that the Montana Wilderness Association urges that the Forest Service adopt a definitive policy concerning the use of private lands contiguous to National Forests and that the Forest Service move aggressively to protect public lands when inappropriate private uses threaten the long-term integrity and productivity of public lands for this and future generations.

Revision
1974

CONSTITUTION AND BYLAWS

Montana Wilderness Association (MWA)
Organized March 28, 1958

PREAMBLE

Under the impact of a rapidly expanding industrial culture, wilderness and wild areas in the United States have dwindled to less than two percent of our national area. Wild lands have certain cherishable values -- scientific, conservational, historic, and recreational. It appears unwise, both from a cultural and economic standpoint, to allow wilderness to disappear entirely from the face of the land. Montana contains a large portion of the remaining wilderness of the United States. It is in an attempt to hold this resource in trust that the Montana Wilderness Association is formed.

ARTICLE I. NAME AND OBJECTIVES

Section 1. This organization shall be known as the MONTANA WILDERNESS ASSOCIATION.

Section 2. The term WILDERNESS as used herein shall apply to areas that retain most of their primeval environment or influence, or to areas free from routes that can be used for mechanized transportation.

Section 3. The objectives of the Montana Wilderness Association are:

a. To enlist public support in a Montana program for classification and preservation of an adequate system of wilderness areas to serve the recreational, scenic, scientific, educational, conservational, and historical needs of the people, now and in the future.

b. To encourage a land ethic that calls for areas where forms of life other than man can work out their destinies with a minimum of human interference.

c. To further the knowledge that wilderness is a valuable natural resource; to gather and disseminate information on use and enjoyment of wilderness.

d. To promote the protection of primeval and primitive areas and the integrity of their ecosystems; to discourage land uses and activities that threaten or disrupt the general environment associated with such areas.

e. To establish a balanced outdoor recreation program on public land, including both wilderness and nonwilderness area.

ARTICLE II. ORGANIZATION AND ADMINISTRATION

Section 1. The council:

a. Administration of the affairs and funds of the association shall be vested in a council of 17, consisting of president, vice-president, and 15 other voting members. (The secretary and treasurer are additional members, ex-officio without vote.)

b. One third of the 15 council members shall be elected at the annual meeting of the association by a majority vote of the membership present.

(Article II continued)

c. The term of office for a council member is three years commencing upon election. A former council member may be reelected after a minimum of one year non-council status. Council vacancies may be filled by council appointment for the unexpired term.

d. Only paid-up members of the association are eligible for election to the council.

Section 2. The officers:

a. Officers of the association shall consist of a president, a vice-president, a secretary, and a treasurer.

b. The president and vice-president are normally elected from the existing council but may be elected from past council members. If a council member is elected to office the vacancy is filled by council appointment for the unexpired term. The president and vice-president are elected by the membership of the association at the annual meeting. The term for both officers is one year, although they may be reelected for a maximum of three consecutive terms regardless of their time on the council prior to reelection.

c. The president, but not the vice-president, remains as one of the 15 voting council members for the one year following the term of office. Only four council members will be elected that year and the vacancy for the subsequent two years will be filled by council appointment.

d. The secreatary and the treasurer are appointed by the president with the concurrence of the council. At the discretion of the president and council, the two positions may be combined in one person. The terms for secretary and treasurer are one year. They may be appointed for succeeding terms.

e. At the discretion of the council in the face of growth and complexity of the association, the positions of secretary and treasurer may be converted into that of executive secretary with appropriate term stipend and budget.

Section 3. Duties of the council:

a. The council shall lead the association toward its objectives. The council shall identify target areas; establish priorities for study and action; develop policies, programs, and strategies; set the dues; manage the funds; keep the membership informed; and rally support as needed.

b. The council shall set the time, date, and place for the annual meeting, notice of which will be sent in writing to the membership not less than 30 days in advance.

c. The council shall meet a minimum of four times a year or more often at the call of the president, or by written request to the president by any three council members. All council meetings shall be held at a place and time set by the president. Not less than five council members shall constitute a quorum. Written notice of the meeting shall be postmarked at least 10 days in advance of the meeting.

d. A resolution or directive in writing, signed by two thirds of the council, shall have the same force and effect as if it had been duly passed by vote at a convened council meeting, providing all members and officers of the council are notified by mail.

(Article II continued)

e. The council shall encourage bequests, donation, and other acquisition of funds for use consistent with the objectives of the organization.

Section 4. Duties of the president:

a. The president shall preside at all meetings of the association and the council and shall conduct all meetings under Roberts' Rules of Order.

b. The president shall call such special meetings of the council or association as deemed necessary. Written notice shall be as stated in Section 3, c.

c. With concurrence of the council, the president shall appoint the secretary and treasurer, assigning them such duties as are appropriate.

d. The president shall appoint such standing, special, or advisory committees as deemed necessary.

e. The president shall authorize all association expenditures.

f. The president shall perform such other duties as directed by the council.

Section 5. Duties of the vice-president:

a. The vice-president shall assume those duties of president as the president is unable to fulfill.

b. The vice-president shall sit as a voting member of the council at all council meetings.

c. The vice-president shall assist the president as directed in fulfilling the obligations of that office.

Section 6. Duties of the secretary:

a. The secretary is responsible to the president.

b. The secretary shall maintain and manage an information center for the association, keeping such files and records as are pertinent to current association activities.

c. The secretary shall send out meeting notices, take minutes at all council and association meetings, keep an up-to-date file of association membership, and publish notices and bulletins as directed by the president. All above duties may be modified or augmented by the president.

Section 7. Duties of the treasurer:

a. The treasurer is responsible to the president and shall manage the funds of the association as directed by the president.

b. The treasurer shall collect dues and inform the president and secretary of the status of the membership.

c. The treasurer shall keep books and issue checks at the diredtion of the president. Checks may be signed by the president or by the treasurer acting as agent for the president.

(Article II continued)

d. The treasurer shall bank and invest all association funds as directed by the president.

e. The treasurer shall prepare an annual financial report for the council and association and shall provide such other fiscal reports as directed by the president. All the above duties may be modified or augmented by the president.

ARTICLE III. MEMBERSHIP AND DUES

Section 1. Membership in the Montana Wilderness Association shall consist of any persons who agree with the objectives of the association as set forth in ARTICLE 1; however, the council may reject any application.

Section 2. By a two-thirds vote of the council, the council may expel from membership in the association any member who shows an overt lack of sympathy with the objectives of the association; but no member shall be expelled until he or she has been furnished with a written complaint and has been given the opportunity of answering or resigning.

Section 3. The council shall establish classes of membership and membership dues,and may in its discretion name honorary members.

ARTICLE IV. AMENDMENTS

Section 1. These bylaws may be amended by a two-thirds vote of the membership present at an annual meeting provided that written copies of the proposed amendment(s) are circulated to the membership not less than 30 days prior to the annual meeting.

Section 2. Amendments may be initiated by the president,or the council, or by a petition signed by 10 paid-up members of the association.

ARTICLE V. TAX EXEMPTION

The Montana Wilderness Association shall operate only as a nonprofit corporation in the public interest; it shall limit its activities strictly to scientific, educational, charitable, and literary purposes. No substantial portion of MWA funds shall be spent in an attempt to influence legislation by whatever means; nor shall MWA participate directly or indirectly in any political campaign on behalf of or in opposition to any candidate for public office.

EXAMINATION OF BILL TOMLINSON

Cross, by Applicants

By Mr. Ross:

Q What is your age?

A Twenty-eight.

Q Have you ever opposed any other utility projects?

A I have testified on numerous occasions both before the legislature and on various other energy related developments; for example, the Westmoreland rail line extension going up Sarpy Creek. I have also testified on units 1 and 2 in a written form. I don't recall all of the instances, but I certainly have testified in the past.

Q And isn't it true that you testified against those projects?

A Yes, it is. I might point out that not all of that opposition was unequivocal. There were certain stipulations which we were trying to press for, and it was simply not flat opposition to all of those projects.

Q Have you ever been affiliated with the Northern Plains Resource Council or other environmental groups?

A I have not been affiliated with the Northern Plains Resources Council; I have been affiliated with other state environmental organizations. For example, I have been a past board member of the Wilderness Association, I am presently a board member of the Environmental Information Center, I have been an employee of the Western Montana Scientist's Committee for Public Information off and on for the past four years.

Q You say in your statement that there simply is no demonstrated need for the power from Colstrip 3 and 4 in Montana. Do I gather from that that you suggest that if it is not needed in Montana that you don't think need can be based upon use out of state?

A I think that Montana does have a certain responsibility towards neighboring states and a certain responsibility within the context of the national energy shortage. I think that that responsibility can be fully met by the export of coal and its combustion at the site of the load.

Q Well, you think then if the power is needed out of state that that is not sufficient basis to justify building a plant in Montana?

A I think that it exerts an inappropriate burden on the state and a burden that needs to be shared by the individuals, by the region that is demanding the large segment of energy, in this case electricity.

Q Well, isn't it true that we in Montana demand and use a lot of products that for which are manufactured or received from other states, such as iron ores from Minnesota, and that they have received the impacts of that?

A That's absolutely correct, but I think you also have to recognize in that same context that Montana has been extracted from since its early stages of statehood. We have always been very much an extractive state, particularly in the areas of forest resources, and also certainly in the area of nonferrous metals, particularly copper. I think that admittedly, I think that it's absolutely clear that we have met more than our share of the responsibility in supplying the raw material needs and accepted the dirtiest portion of that process already, and that we are not shirking our responsibility by not accepting it now.

Q Well, don't you think that one of the things that has made this country as strong is the fact that interstate commerce of goods from one state to another has allowed us to share different resources and different products?

A It has some advantages certainly.

Q In your attachment you make reference to the Utility Siting Act. You realize that your references there are just paraphrased and not the entire Siting Act; isn't that correct?

A That's correct.

Q For example, you realize that the Siting Act in its first section acknowledges that there may be a need for energy facilities in Montana?

A Absolutely, and I would say that this particular statement is certainly not in opposition to the demonstration of that sort of need.

Q What sort of need do think one has to demonstrate under the Siting Act?

A I think that -- it's my understanding on the basis of the material that I have reviewed to date that by and large the state energy load can be met by the on line operation of units 1 and 2, and that perhaps there will be a requirement down the line a few years for an additional unit in perhaps the 300 megawatt range.

Q What basis do you have for that statement?

A Examining the draft Environmental Impact Statement and its final addendum, miscellaneous publications that come across my desk all the time. I'm not prepared to give you a lengthy bibliography of those sources right now.

Q Have you reviewed the transcripts and exhibits in this hearing regarding the issue of need?

A I have not; I think it has to be recognized that by and large those are not readily accessible to the public. There is simply no reasonable forum for public review, and I think that's a very unfair question; it's been raised before all of these people today.

Q Well, don't you believe that the Board of Natural Resources should make their decision on the record that has been made in this hearing?

A Certainly, along with the main public decision-making document which is the draft EIC, EIS I'm sorry.

Q You're aware that that is part of the record?

A Yes, I am.

Q You also state in your statement that the daily emissions from the power plant will violate the Clean Air Act forbidding significant deterioration. What basis do you have for that statement?

A There has been a great deal of testimony given in the initial portion of this hearing both pro and con. I recognize the fact that the power companies were successful in carrying their particular portion of the case before the Board of Health.

Q You are aware then that the Board of Health made a finding that the plants would meet the significant deterrioration standard?

A Yes, but I would also point out that that has not been demonstrated yet.

Q Well, are you aware that the first test results from unit 1 and 2 showed that the plants would be well under the standards?

HEARINGS EXAMINER: Just unit 1, unit 2 isn't going yet.

Q Yes, unit 1?

A Yes, I'm fully aware of those analyses. I have had an opportunity to look at those very very briefly. I think, however, that you have to recognize full well that we're dealing with brand new equipment, equipment that is probably operating at its peak performance at the present time, and does not provide for the eventual loss of efficiency as the equipment wears.

Q What basis do you have that the plant will lose efficiency as the equipment wears?

A Testimony which I have examined from the southwest provisions regarding testing of equipment at the Four Corners generator particularly. Again, I did not come today prepared with a bibliography for those references. I could generate them if need be, but I certainly do not have them available right now.

MR. PETERSON: No further questions.

HEARINGS EXAMINER: Could I get your full name?

WITNESS: Yes, William Tomlinson.

HEARINGS EXAMINER: And you're speaking on behalf of the Montana Wildlife Association?

WITNESS: No, the Montana Wilderness Association.

HEARINGS EXAMINER: Wilderness Association. Okay, I do have your statement, I'm sorry.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Mr. Bailey?

JOHN BAILEY, appearing as a public witness, having been first duly sworn upon his oath, was examined and testified as follows:

HEARINGS EXAMINER: It is my understanding you don't have a written statement. Would you give the reporter your full name and address, sir? Please be seated, state your name, and go ahead with your statement.

Oral Statement

I'm John Bailey. I'm a stock owner in Dan Bailey, a Montana corporation in Livingston. I'm on the board of directors of the Joe Brooks chapter of Trout Unlimited. I'm also on the board of directors of the Environmental Information Center in Helena. I'm not here to represent either one of those organizations today, representing our business which is in the sporting goods business, manufacturing business, in Livingston, primarily dealing in tourism.

I'm against 3 and 4 primarily because I'd rather see the coal shipped to the points of need. I think this would help Livingston's economy as it is a railroad town, they have major shops there, they work on the locomotives, and we've seen some employment already from the coal being shipped east. Hopefully, if 3 and 4 are not built, the western energy companies would look into the idea of converting the coal in their area. Now if they can have it converted here, I wouldn't see any reason why they would be looking at that alternative. I think if they did, Montana coal would probably go west. Also, I'd like to see the power generated out of the state because I think this would give a better chance for stopping the Allenspur Dam in the future. If power is converted in the state and gasification plants come in the future, then there's going to be a great need for water and I'm afraid the need for Allenspur. Thank you.

EXAMINATION OF JOHN BAILEY

Cross, by Applicants

By Mr. Peterson:

Q Who is proposing the construction of Allenspur Dam?

A I don't think anyone will admit that they are; BLM certainly has a lot of plans on it.

Q And does it contemplate the addition of generating units?

A I'm not sure I understand; you mean in the power plant?

Q Yes.

A Depending on proposals you look at. If you look at the, what are they, the Great Plains Resource books and the aqueduct books and whatever, they all have power generating in Allenspur, but they have it primarily to stockpile water for eastern Montana.

Q What shop are you a stockholder in down there, John?

A Dan Bailey.

HEARINGS EXAMINER: They make good girdlebugs.

Q Have you ever been to Colstrip?

A Yes, I have.

Q When was the last time you were down there?

A It's approximately I think three years ago.

Q What was the purpose of the visit?

A Trout Unlimited had a tour so we could just familiarize people in the Livingston area of the Colstrip; it's rather hard to talk about an area if you've never been there.

MR. PETERSON: I have no further questions.

HEARINGS EXAMINER: All right, thank you, sir.

(WITNESS EXCUSED)

HEARINGS EXAMINER: Mr. Reiner?

RALPH REINER, appearing as a public witness, having been first duly sworn upon his oath, was examined and testified as follows:

HEARINGS EXAMINER: Would you give the reporter your full name, sir? Go right ahead, sir.

Oral Statement

I am Ralph Reiner. I live on a ranch between Toston and Townsend. I don't have any statement, of course, to give you, and I'm only here representing myself. I am against Colstrip 3 and 4 being built. I was against 1 and 2 being built. I do not think the state of Montana has to have the plants 3 and 4 for power. I, like some of the other predecessors and other people in this group over the period of time that you've been listening to so many people, believe that it's best to ship the coal outside the state of Montana. I would not like to see strip mining. I do not believe that if you strip it, you are going to get it reclamated properly. I have seen some reclamation, good showcase reclamation, down at Colstrip, and I know the Chris Affiliates who did a good bit of it; and Western Energy has put a tremendous amount of trouble into being able to put the land back to use, and they've done pretty good so far, not like it was, but they've done some good. But they spent a tremendous amount of money to do it, and I say, to me, in my own personal opinion, I call it a show strip reclamation.

I know we have an awful lot of coal. It's been stated that we might have 150,000,000,000 tons of coal in the state of Montana, possibly 32,000,000,000 to 40,000,000,000 tons in five counties in southeastern Montana, and I think the coal is a good thing to have. I think it's a fine attribute to the state of Montana that it has the coal, but I am against building the power plants. I'm against taking the water out of the Yellowstone River to be able to make the energy to begin with from the coal, and you have to have a tremendous amount of water. I do think that even the minimum standards will possibly pollute the land where you could not use it for growth again.

Montana is a tremendous exporter of wheat, cattle, sheep, barley, oats, all small grains, rye. I think we've done a pretty good job of exporting to the United States, and we, of course, import a lot of things from them.

I am not a great chemist; I only had a minor in chemistry at the university, but I do believe that some of the emissions will hurt the land, will stop you from growing grass properly, and we have some extremely fine grass. I don't think the scrubbers, even doing their very best, are able to stop all of the emissions. If there's any possibility whatsoever, even if it's only one tenth of one hundred percent, I would not like to see the land go to an area to where you can't raise proper grains and take care of your animal. I prefer to see the wildlife. I prefer to see the cattle and the sheep. I prefer to see the grains.

I don't think Montana has to have 3 and 4 to have enough energy. Montana does import some energy, but we also export energy from some of our dams. I think if we use our own power inside the state of Montana, we do not need 3 and 4, and I'm worried about a later time of the Yellowstone River water to where in the spring time there's plenty of water, good run-off, flooding, but in the summer time there may not be enough water.

A lot of towns, a lot of ranchers, a lot of farmers, a lot of people are dependent upon the water in the Yellowstone River, and I would like to see it left alone. I, of course, would also be against any of the dams built on the Yellowstone River, and I'd like to see it left alone.

I have nothing against Montana Power whatsoever, although I don't get my power from them, but I'm sure that the coop probably buys it from Montana Power, so I'd be in bad shape without some I'm sure since everything at the ranch is on electricity. But I would rather the coal be dug out of the ground, deep mined if possible rather than strip mined, shipped on railroad or any other means you want to; and it has been reported, so I've read in newspaper only, that the great amount of electricity is going to be used from 3 and 4 to be shipped outside the state of Montana and a certain amount to be used inside the state of Montana. I'd rather see the coal dug and shipped out, and not take a chance that any emissions whatsoever might hurt the grazing land of the farmers and ranchers that have been there for so many years. I know a little bit about salvage in Montana, I was born in Montana; and I just finished writing a book, this is only part of a book or a manuscript, called Introducing Southeastern Montana. I spent three and a half years, I traveled 12,000 miles, I worked in nine counties, I took over 4,000 colored photographs, I entered every town, village, store, up and down the Powder River, the Tongue River, the Yellowstone River, the Powder River; I've been in almost every place there is in southeastern Montana. I make my living from writing books. I'm a Montana author, and I have four out so far and just finished two more and working on three and just finished a movie story for a new movie.

I was born in Montana; I've been here all my life except for my Air Force time flying and my college time, which was not from Montana, but from the University of Texas in Austin, and St. Mary's University and Trinity University. I'm a geologist by professional degree, and I strictly am against -- I'm not against the use of the coal, but I am against the use of building 3 and 4 in the state of Montana. I would be against 5 and 6 and 7 and 8 or 9 and 10 or how many they like to build. A gentleman asked a while ago if there was any places outside the state of Montana to the west that were going to build plants. I have no idea whatsoever whether they will or not, but if they don't get any plants built in Montana but they can use all the coal they want, I'd be willing to bet almost anything that they'll build some plants either in California or Oregon or Washington; and if most of the electricity is going to go outside, I'd rather see the coal dug, stay away from strip mining, deep mine the coal if possible. If you have to do any strip mining, I'd like to see it reclamated, not 99.9, 100 percent, if you're going to strip mine anything.

I do believe that the minimum standards set by the state and the federal government will still cause some damage. This is my own personal opinion, and I do think the emissions when they come out of the tall towers, mixing with the atmosphere gases, will combine and when it falls upon the earth, will deplete the grass, and I don't think the grass will grow anymore. I say this is a personal opinion, but I base it a little bit upon geology. I'm not a youngster, I'm 49 years of age; and I have a fairly good education, and I've tried to do what I could to read up as much as possible. I've read all the coal reports I could get a hold of, and I think that Montana Power also has done a tremendous job because they did put up a tremendous amount of money for an awful lot of research, and it's been very good. I did spend a lot of time down around the Fort Howes ranger station area where the EPA was doing quite a bit of work, especially Dr. Morton; and he was very scared that it would hurt the grasses. He was doing small animal work at the time for a few years, still going on down there. But I have come to the conclusion myself that Montana doesn't need 3 and 4, and I'm afraid of what it would do to the grains, the grasses, the cattle and sheep industry, possibly to the wildlife, to the submergible water, to the fresh water, aquifers, to the river and the streams. I don't believe there's going to be enough water in the future years, especially if 3 and 4 goes in, if you don't start putting some dams someplace on the Yellowstone River. I believe that the Bureau of Reclamation has about five different places they would like to build some dams, and I wouldn't like to see any of them built.

So, as I say, most of this is my own personal opinion, my own travel, my own research, and my own talking. I've talked to about 2,300 people in southeastern Montana over my travel to do this book, and a lot of people who were for 3 and 4, and a lot of people who were against 3 and 4. I talked to a lot more people against than were for, and they didn't interfere with my own personal thoughts because I'll make up my own mind. I have visited all the places; there's no place that they're digging coal out now that I wasn't there. In fact, Decker and I had a fight down there because I found some water coming into the Tongue River Reservoir that had hydrocarbons in it, and I had it assayed at MSU to see if it was hydro-carbons, and it was; and I reported it, and they spent a lot of money to make sure it didn't keep on doing it.

Everywhere I went Montana Power, Western Energy, Decker, and so forth, Long Construction, were all very nice to me. They showed me everything they had to show, and they gave me all the information I wanted. They didn't try to hold anything back, and let me make up my own mind by what I saw. But I am against 3 and 4, and I'll stop.

HEARINGS EXAMINER: Mr. Peterson.

EXAMINATION OF RALPH REINER

Cross, by Applicants

By Mr. Peterson:

Q Where is your residence, Mr. Reiner?

A I live on a ranch outside of Townsend.

Q Are you one of the owners of the ranch?

A Yes, I am.

Q Or the owner?

A Yes, I am.

Q And how long have you been in that area?

A Only a year, sir.

Q Prior to that, sir, where did you reside?

A Prior to that I resided in Wolf Point, Montana, sir.

Q Did you have a ranch there?

A No, sir. I own land in four places in the state of Montana, though.

Q Are you principally engaged in writing books?

A Yes, sir, that's how I make 99 percent of all my money is by writing books and magazine articles and the theme for a movie.

Q Are any of those books of a technical nature, deal with scientific works?

A No, I don't believe so. The Flowering Beauty, just a wild flower book, Going to the Sun, Majestic Montana, Wildlife of the Montana Rockies, this kind of thing.

Q Who is your publisher?

A W. A. Cruger, Phoenix, Arizona, Cackston Publishers in Idaho. I had one done in Bozeman by Art Craft and Mountain Press in Missoula.

Q Are you a member of any environmental group?

A No, sir, I am not. I don't belong to any group or organization period, except the United States Air Force Reserve.

Q Have you ever practiced your profession of geology?

A Yes, sir, I have.

Q Where was that?

A Down in Texas, Forest Oil Corporation.

Q How long were you down there?

A Eight years, sir, after my bachelors degree from the University of Texas.

Q Then you came up to Montana?

A I came back home to Montana, yes, sir, because I was born in Billings, sir.

Q Do you still have family there?

A My mother and father are dead, my grandmother and grandfather are buried up on the Blackfeet Reservation, I have a brother living in San Antonio, Texas, and a brother living in Honolulu, Hawaii. I'm the only brother who came back home to Montana.

All three of us were born here in Montana.

Q Have you been in the Colstrip area since unit number 1 has gone on line?

A Yes, sir.

Q When was the last time you were down there?

A Week before last.

MR. PETERSON: No other questions.

HEARINGS EXAMINER: Very well, thank you, sir.

WITNESS: Thank you very much.

(WITNESS EXCUSED)

HEARINGS EXAMINER: And we're out of tape so we'll recess.

(RECESS AT 5:28 P.M.)

After a brief recess the hearing reconvened at 5:40 P.M. on Tuesday, March 16, 1976.

THOMAS ALAN DAILEY, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT EXAMINATION OF THOMAS ALAN DAILEY WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

TESTIMONY OF THOMAS ALAN DAILEY
IN OPPOSITION TO COLSTRIP UNITS 3 AND 4

I My name is Tom Dailey and I am currently a candidate for a Bachelor of Arts degree in Religious Studies from the University of Montana. At the conclusion of winter quarter, I will return to Billings, Montana where I will be employed as an apprentice for Carpenters Local Union 1172 (Appendix A). Although I am employed in Billings I was born in Lodge Grass, Montana, I am an enrolled member of the Crow Tribe (U6621) and consider the Crow Reservation home. I am one of five heirs to the lands noted in Appendix B. This land is currently in Estate and will be settled in 1983.

II In a study of May 9, 1975 (Appendix C), 73.2 per cent of the Crows surveyed stated that they were not willing to allow the reservation to be polluted in exchange for coal development. 75.8 per cent were not willing to accept a significant non-Crow population increase on the reservation in exchange for coal development. This study also shows that 60.1 per cent of the Crows feel that there will be cultural degradation of their community by coal-related and power plant development in there area.

III As an enrolled member of the Crow tribe, owning land in trust on the Crow reservation in the Ceded area, I feel Colstrip 3 and 4 will have a detrimental effect on my land and my future. The Crow Tribal Survey of 1975 concludes: "The Crows who participated in this survey admit to their confusion. They acknowledge a reservation-wide lack of information on the subject of coal mining and development." I attempted to educate myself to the best of my ability, on the impact of coal development and power plants. I have personally worked with the Office of Coal Research, and have investigated the various impacts of power plants (socio-economic factors, air pollution, hydrology, etc.). I am firmly convinced that coal plants and agriculture are not compatible. When my land is eventually released from Estate I wish to engage in agriculture as in the tradition of my mothers family. I have traveled to Colstrip and seen the construction of Units 1 and 2, trailer towns, drug abuse among employees of Bectal, and a general degradation and loss of dignity. Traditionally my family has always held a respect for the earth for it was their livelihood and sustenand. It is obvious to me that to raise cattle in a stripmine or in close proximity to a power plant and it's air pollution is impossible. I further testify that I hope my offspring never have to see the disgust of Colstrip 3 and 4 and the heavy industrialization that would result.

EXHIBIT "A"

Township 1 South, Range 37 East, M.P.M., Big Horn County, Montana

Section 1: Lots 1, 2, 3, 4, 5, 6, 7, 8, S½N½, N½S½
Section 2: Lots 1, E½ of 2, 7, 8, E½SW¼NE¼, SE¼NE¼, NE¼SW¼, N½SE¼

Township 1 North, Range 37 East, M.P.M., Big Horn County, Montana

Section 1: SW¼SW¼
Section 2: SW¼NW¼, SW¼, W½SE¼, SE¼SE¼
Section 3: S½NE¼, SE¼
Section 11: All
Section 12: SW¼SW¼NE¼, W½, W½SE¼, SE¼SE¼
Section 13: All
Section 14: All
Section 15: SE¼SE¼
Section 22: N½, SE¼SW¼
Section 23: All
Section 24: All
Section 25: All
Section 26: All
Section 27: NE¼, E½NE¼NW¼, NE¼SE¼NW¼, E½NW¼SW¼, NE¼SW¼SW¼, E½SW¼, SE¼
Section 34: N½NE¼, SE¼NE¼, NE¼NE¼NW¼, SE¼NW¼, E½SW¼, W½SE¼, SE¼SE¼
Section 35: N½, N½N½SW¼, S½SW¼, N½SE¼, S½SW¼SE¼, SE¼SE¼

Township 1 South, Range 38 East, M.P.M., Big Horn County, Montana

Section 2: Lots 1, 2, 3
Section 3: Lots 1, 2, 3, 4, S½
Section 4: Lots 1, 2, 3, 4, S½
Section 5: Lots 1, 2, 3, 4, S½
Section 8: Lots 1, 2, 3, 4, N½N½
Section 9: Lots 1, 2, 3, 4, N½N½
Section 10: Lots 1, 2, 3, 4, N½N½
Section 11: Lots 1, 13

Appendix A

BILLINGS CARPENTRY INDUSTRY
JOINT APPRENTICESHIP & TRAINING COMMITTEE

BILLINGS CONTRACTORS COUNCIL, INC
P. O. BOX 671
BILLINGS, MONTANA 59103
TEL. (A.C. 406) 259-1703

LOCAL UNION NO. 1172
24 SOUTH 29TH STREET
BILLINGS, MONTANA 59101
TEL. (A.C. 406) 259-6911

To All Carpentry Apprentices and Applicants:

This is to advise you that your numerical listing on the Apprenticeships Roster is # 2. As stated to you during your interview, you will be called out in numerical order as the need for apprentices arises. Please advise Carpenters Local Union No. 1172 as to any change of address.

Very truly yours,

O'Seary

Secretary, J.A.T.C.

Appendix B

INVENTORY AND APPRAISEMENT OF INDIAN TRUST LANDS OF FLORENCE ILETA STOVALL DAILEY a/k/a FLORENCE ILETA STOVALL FORMANACK, DECEASED CROW ALLOTTEE NO. 3699, OF THE CROW INDIAN RESERVATION IN MONTANA

According to the records of the Crow Indian Agency, Crow Agency, Montana, Ileta F. Stovall Dailey, a/k/a Ileta F. Stovall Formanack, at the time of her death Sept. 5, 1968, was possessed of the following Indian trust lands on the Crow Indian Reservation in Montana:

HER OWN ALLOTMENT	PRINCIPAL MERIDIAN MONTANA T. 4 N., R. 36 E., Sec. 31 - Lot 1, 2, E½NW¼ Containing 156.01 acres	

ESTIMATED TOTAL VALUE OF DECEDENT'S ALLOTMENT $ 6,240.40

INHERITED INTERESTS: The above decedent had no inherited interests

AQUIRED BY DEED Al. #1529 Pretty On Top Died 4-7-18 Pro. #54947-19	T. 6 S., R. 37 E. Sec. 32 - S½NW¼, SW¼ Containing 240.0 acres Estimated at $9,600.00	Aggre. All $ 9,600.00
Al. #1530 Pretty Back of the Neck Died 4-13-47 Pro. #6634-48	T. 6 S., R. 37 E., Sec. 32 - SW¼NE¼, W½SE¼ T. 7 S., R. 37 E., Sec. 8 - NE¼, E½NW¼, SE¼, E½SW¼ Sec. 9 - W½E½W½, W½W½ containing 840.0 acres Estimated at $33,600.00	All restri. deed Aggre. all $ 33,600.00
Al. #3028 Thomas Badbear Died 5-28-62 K-199-63	T. 6 S., R. 35 E., Sec. 26 - Lot 2, SW¼NE¼, S½NW¼ Containing 163.54 acres Estimated at $6,541.60	All restri. deed Aggre. all $ 33,600.00
Al. #3029 Edward Badbear Living	~~T. 6 S., R. 35 E.,~~ ~~Sec. 22 - E½SE¼~~ ~~Sec. 27 - Lots 1, 5, 6~~ containing 206.54 acres Estimated at $8,261.60	~~All restri. deed~~ aggre. all $ 8,261.60

Should be T. 6 S., R. 35 E.,
Sec. 27. S½ NW¼, N½ SW¼

Henry Badbear Died 5-28-40 Pro. #78413-40	Sec. 22 - S½SW¼, SW¼SE¼ Sec. 27 - Lots 2, 3, 4, SW¼NE¼ Containing 293.69 acres Estimated at $11,747.60	Aggre. all $ 11,747.60
Al. # 2656 Dora Badbear Died 2-16-19 Pro. #84019-19	T. 6 S., R. 35 E., Sec. 34 - W½NE¼, S½NW¼ Containing 160.0 acres Estimated at $6,400.00	All restir. deed Aggre. All $ 6,400.00
Al. #740 Kills in the Morning Big Snake Died 11-3-31 Pro. #35254-33	T. 6 S., R. 35 E., Sec. 27 - W½SE¼ Containing 80.0 acres Estimated at $3,200.00	All restri. deed Aggre. all $3,200.00
Al. #1531 Henry Pretty On Top Died 6-3-54 Pro. #10379-55	T. 6 S., R. 35 E., Sec. 23 - SW¼SE¼ Containing 40.0 acres Estimated at $1,600.00	All Restri. deed Aggre. all $ 1,600.00
Al. #1532 Gros Ventre Red Woman Bird Died 4-7-07 Pro. #24870-15	T. 6 S., R. 35 E., Sec. 23 - Lot 6, NW¼SE¼ Sec. 24 - NW¼ Containing 119.08 acres Estimated at $4,763.20	All restricted deed Aggre. all $ 4,763.20
Al. #1515 Inside the Mouth Died 2-13-16 Pro. #30569-18 21801-22	T. 6 S., R. 35 E., Sec. 23 - Lot 1 & 5 Sec. 24 - SW¼NW¼, NW¼NW¼ Containing 159.75 acres Estimated at $6,390.00	All restri. deed aggre. all $ 6,390.00
Al. #1436 Big Sheep Died 9-14-43 Pro. #7933-44	T. 6 S., R. 35 E., Sec. 15 - W½NE¼, E½NW¼ containing 160.0 acres Estimated at $6,400.00	All restri. deed aggre. all $6,400.00
Al. #1437 Turtle Big Sheep Died 7-13-34 Pro. 35438-36	T. 6 S., R. 35 E., Sec. 15 - W½NW¼ Containing 80.0 acres Estimated at $3,200.00	All restri. deed aggre. All $ 3,200.00

TOTAL ESTIMATED VALUE OF DECEDENT'S ESTATE $ 138,002.80

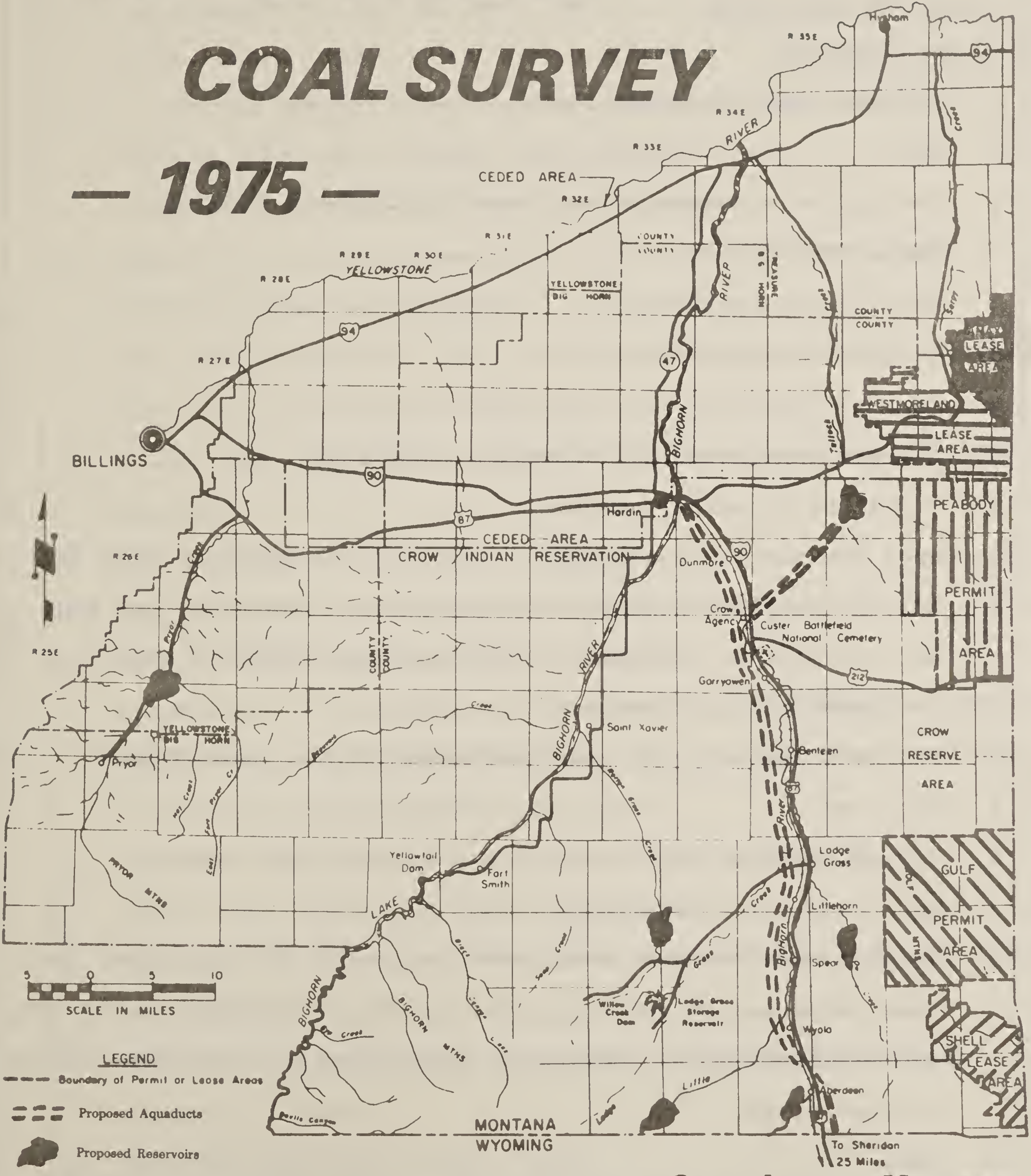
Al. # 3030 Henry Badbear Died 5-28-40 Pro. #78413-40	T. 6 S., R. 35 E., Sec. 22 - S½SW¼, SW¼SE¼ Sec. 27 - Lots 2, 3, 4, SW¼NE¼ Containing 293.69 acres Estimated at $11,747.60	All restri. deed Aggre. all $ 11,747.60
Al. # 2656 Dora Badbear Died 2-16-19 Pro. #84019-19	T. 6 S., R. 35 E., Sec. 34 - W½NE¼, S½NW¼ Containing 160.0 acres Estimated at $6,400.00	All restir. deed Aggre. All $ 6,400.00
Al. #740 Kills in the Morning Big Snake Died 11-3-31 Pro. #35254-33	T. 6 S., R. 35 E., Sec. 27 - W½SE¼ Containing 80.0 acres Estimated at $3,200.00	All restri. deed Aggre. all $3,200.00
Al. #1531 Henry Pretty On Top Died 6-3-54 Pro. #10379-55	T. 6 S., R. 35 E., Sec. 23 - SW¼SE¼ Containing 40.0 acres Estimated at $1,600.00	All Restri. deed Aggre. all $ 1,600.00
Al. #1532 Gros Ventre Red Woman Bird Died 4-7-07 Pro. #24870-15	T. 6 S., R. 35 E., Sec. 23 - Lot 6, NW¼SE¼ Sec. 24 - NW¼ Containing 119.08 acres Estimated at $4,763.20	All restricted deed Aggre. all $ 4,763.20
Al. #1515 Inside the Mouth Died 2-13-16 Pro. #30569-18 21801-22	T. 6 S., R. 35 E., Sec. 23 - Lot 1 & 5 Sec. 24 - SW¼NW¼, NW¼NW¼ Containing 159.75 acres Estimated at $6,390.00	All restri. deed aggre. all $ 6,390.00
Al. #1436 Big Sheep Died 9-14-43 Pro. #7933-44	T. 6 S., R. 35 E., Sec. 15 - W½NE¼, E½NW¼ containing 160.0 acres Estimated at $6,400.00	All restri. deed aggre. all $6,400.00
Al. #1437 Turtle Big Sheep Died 7-13-34 Pro. 35438-36	T. 6 S., R. 35 E., Sec. 15 - W½NW¼ Containing 80.0 acres Estimated at $3,200.00	All restri. deed aggre. All $ 3,200.00

TOTAL ESTIMATED VALUE OF DECEDENT'S ESTATE $ 138,002.80

Appendix C

CROW TRIBAL COAL SURVEY

— 1975 —



Prepared For The Office Of Coal Research — Crow Agency, Montana
Prepared By Rural Research Associates — Missoula & Edgar, Montana

April 6, 1975

ADVERTISING SUPPLEMENT TO THE HARDIN HERALD, MAY 8, 1975

HEARINGS EXAMINER: Mr. Peterson, you may cross.

EXAMINATION OF THOMAS ALAN DAILEY

Cross, by Applicants

By Mr. Peterson:

Q You are Thomas Alan Dailey?

A Yes.

Q And you're a member of the local 1172 of the Billings carpenter union?

A Yes, I'm an apprentice.

Q You are an apprentice?

A Yes.

Q And are you presently employed in Billings?

A I will be in about a week.

Q Have you had any employment -- who are you going to work for?

A I'll be working through the carpenters -- wherever they send me. It's in my testimony. I'm currently going to school at the University of Montana.

Q You're a member -- an enrolled member of the Crow Tribe?

A Yes I am.

Q Did you vote on the survey that they took down there?

A No, I was not interviewed.

Q And the question that they asked -- one of the questions that they asked was do you favor the opening of Colstrip mines and the construction of coal-fired power plants on the Reservation; is that right?

A Yes.

Q And that vote was 36 percent -- just over 36 percent in favor and 46.4 percent against, and 16.7 percent had no opinion; and 1.7 percent had other thoughts; is that right?

A I have to find out where you are in this survey.

Q First question, do you favor the --

A Right, okay. Yes.

Q In the one exhibit that you have prepared, Tom, Exhibit A, which is part of, I guess, your appendix --

A I did that in three different appendices.

Q Exhibit A, part of appendix B, are those the trust lands in which you have an interest?

A Yes, that's correct. All of Exhibit A is the summary of the land, but I've also included the land description.

Q I see, okay. Are you a member of the Northern Plains Resource Council?

A No, I am not.

Q How is it that you desire to testify here today?

A Well, in my mother's original allotment, which if we go to appendix A, or appendix B, principal meridian Montana, underneath that, containing 156 acres; that is in close proximity to Colstrip, approximately 30 miles.

Q How many other owners are there of that allotment?

A There are 5 heirs, of which I am one.

Q When do you anticipate that those lands will pass to you as an allottee?

A That's in my testimony, at the end of paragraph 1, Roman numeral 1, 1983.

Q Is there any coal on that land?

A It has not been explored for coal on that land; but the other land located in the Wolf Mountains is in the gulf printed area of the Crow Reservation, which there is considerable amount of coal.

Q You do not speak here today, do you, as an official of the Crow Tribal Council?

A Are you familiar with how the Crow Tribal Council is organized?

Q No, I'm asking you if you speak here on their behalf?

A The Crow Tribal Council is organized as a general council; one of two in the United States so organized with 4 elected officials. But there are no single spokemen for the Crow Tribe. All Crow members can speak equally and do in the general council.

MR. PETERSON: That's all I have.

HEARINGS EXAMINER: Thank you, sir. Your testimony will go to the Board.

(WITNESS EXCUSED.)

LAURAN EMERSON, appearing as a public witness, having been first duly sworn upon her oath, both as to her written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF LAURAN EMERSON WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

This testimony is based on the belief that we can learn from our mistakes.

The chain of events in powerplant construction in the Southwestern U.S. has caused self-perpetuating problems for a four-state area. The Board of Natural Resources should look closely at what has happened there if we are to avoid those same problems and more, and in greater magnitude, in Montana and the northern plains.

In the early 1960's, the Four Corners powerplant was built in New Mexico. Despite a public outcry at the pollution it caused, and company promises of a clean-up, it is still seriously degrading the quality of air and causing increasing concern over its effects on people, animals, crops and vegetation. According to the Navajoes, sheep in the area are beginning to bleed from the nose. By the late 1960's, drifting emissions from the stacks had made their first impact on visibility in the canyons and parklands of the entire four corners area.

The Four Corners plant was just the beginning. Other companies joined the powerplant boom that the Arizona Public Service Company had begun. In 1971, the 1510-megawatt Mohave project in Nevada went into operation, and the public became aware of a plan by a consortium of energy companies to build at least four more enormous coal-fired plants, together with a number of smaller ones, in various parts of the Southwest.

In 1970, the Salt River Project of Arizona was also ready to build a plant, the Navajo project, at Page, Arizona. The story of Page is an indication of what will happen at Colstrip. The town was begun in 1957, populated by workers who were building the Glen Canyon Dam. After the dam was built, many of the construction workers moved away and the town went into a decline. Page had little reason for being, but 3000 of its 5900 residents stayed, hoping for good times to come again. The Navajo project was just what they needed. At siting hearings, the town's leaders pleaded for the plant. The utilities and the Interior Department jumped at the chance, and Page got the plant. Its construction raised Page's population in 1974 to an all-time high of 9,036.

Much of the opposition to the Page plant was based on a fear of the other proposed projects which, if allowed to proceed, would pile pollution upon pollution, steadily degrading the environment. That fear was soon realized by the simultaneous construction of three more powerplants and the expansion of a fourth, with an aggregate ultimate capacity of 3830 megawatts.

Bad as the cumulative effects of the first seven plants had been, they were only the beginning. In July, 1975, the Bureau of Land Management released a draft environmental impact statement for another generating monster, this one to be the biggest in the U.S. Known as the Kaiparowits project, the 3000-megawatt plan would encompass a four-unit coal-fired powerplant, four underground coal mines, a limestone quarry, a new town for up to 15,000 people, 2,000 miles of new roads across wilderness and unspoiled lands, and 1460 miles of new transmission corridors across Utah, Arizona, Nevada and California. The proposed construction site was 36 miles from the Navajo plant at Page, within 250 miles of eight national parks, 26 national monuments, three national recreation areas and three national historic sites and memorials -- one fifth of all the acreage of the National Park System.

In 1973, then-Secretary of the Interior Rogers C.B. Morton rejected applications for the Kaiparowits project. But in 1975, using the Nixon-Ford Administrations' "Project Independence" as justification, Interior granted a reconsideration of the proposal. The Kaiparowits plan has been marked by discrepancies in every area of its impact statement. The utilities' forecasts of energy needs were even questioned by the Federal Energy Administration, which said that, "Recognizing that demand forecasts must necessarily reflect many subjective judgements, FEA believes it important that there be forecasts compiled independently of those produced within the electric utility industry."

The plan has not yet been approved, but it is indicative of its future that a spokesman for the town of Page was on hand during the arguments over Kaiparowits. He demanded that the government approve the new plant in order to halt, once more, another decline in the economy of his town. Page's Navajo plant was in operation. The workers were looking for new jobs. Page had gone full circle, and Kaiparowits would keep its newcomers employed for a couple more years.

There are now nine major generating plants in the four corners area, and plans for expansion of most and construction of five more. A map of the four corners area looks ominously like the blueprint for the Northern Plains that first appeared in the 1971 North Central Power Study. That study proposed a chain of generating plants at 42 sites across the Northern Plains, making the four corners area seem small by comparison. 25 of those plants were proposed for Montana.

One of the few differences between what has happened in the Southwest and what could happen here is the land that is at stake. In the Southwest, it is predominantly national park and recreation land that has suffered from the plants. In Montana, it is agriculture that is at stake. If Colstrip 3&4 is approved, not only will towns like Colstrip have and create the problems of Page, but the livelihood of Montanans today will be lost in the shuffle.

The only time the power plant boom can be stopped is now. If Colstrip 3&4 is approved, the workers who build it will want to build others when they are done. Their need for jobs will be valid, and the powers that be will succumb to their demands. Montana will never be the same. The Northern Plains will in fact become what the plains of the Southwest have become -- the dirty powerhouse for the energy-consuming centers of our country.

There are hundreds of ways, beyond their ads telling us to turn off our appliances, that Montana Power Company could be in the forefront of a move to conserve energy. They and the other companies involved in the Colstrip plan must be made to realize that they cannot keep on building powerplants and increasing both the supply of, and demand for, electricity. The mentality of unchecked growth and unchecked waste must change. The members of the Board of Natural Resources have a once-in-a-lifetime opportunity to challenge and change that mentality by denying the Colstrip 3&4 application.

Info - March issue Audubon Magazine

HEARINGS EXAMINER: Mr. Bellingham.

EXAMINATION OF LAURAN EMERSON

Cross, by Applicants

By Mr. Bellingham:

Q Would you state your age, please?

A Twenty-nine.

Q And you live at Stockett, Montana?

A Yes.

Q What does your husband do?

A He's a doctor.

Q Now, you've talked in your statement at great length about the Four Corners area; have you not?

A Yes.

Q Where did you get this information?

A The information was written by Alvin Josephey, who is the editor of American Heritage Magazine.

Q And you obtained the information out of American Heritage?

A No, it was in the March issue of Audubon magazine.

Q Audubon?

A Yes.

Q And so you've extracted your information from Audubon magazine?

A Right.

Q And other sources as well, or not?

A The information on Four Corners is just from that article. It parallels our -- my own, as an economist.

Q And the rest of the information or the items that you've got in here, you drafted that yourself; is that right?

A Yes.

Q You are aware, of course, that there is a difference in the laws of the state of Montana, and I'm referring now to the Montana Utility Siting Act that covers this particular proceeding, and the laws found down in the Four Corners area; are you not?

A I'm not aware of the laws in the Four Corners area.

Q But you assume they would be different than the Montana law?

A I don't know.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Very well. Your statement and testimony will go to the members of the Board, as well as the oral testimony. Thank you.

(WITNESS EXCUSED.)

JAY CORNISH, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF JAY CORNISH WAS DIRECTED TO BE INSERTED AT THIS POINT.)

The Role of Selenium as a Trace Element in Coal-fired Electric Generation Facilities' Emissions

submitted by: Jay Cornish
(testimony)

During the past several weeks, the board has heard comments as to the ability of the given pollution control facilites to prevent acute SO_x damage to the surrounding vegetation. Doubts have been cast by C.E. Carlson and Dr. C.C. Gordon on the matter, stating concern over the potential impact of air pollutants on the Ponderosa Pine parklands and grassland ecosystems within 20-30 miles of the generating unit (s), possibly extending into the Custer National Forest. One may also recall William McRae's reference to expert testimony at the Board of Health hearings that "malfunctions and breakdowns of the system because of severe scaling, plugging, corrosion and heat damage", (Missoulian, 1/10/76, p.2) were possible, or Rita Sheehy's comment on the apparently (long term) untested technology, (ie, the use of both a closed water system and a scrubber system utilizing fly ash alkali) in units one and two. However, I do not (or cannot) quibble over these details. The preliminary reports by DHES engineer Harry C. Keltz (Miss., 1/24/76, p. 18) at 260 MW generating capacity and the more recent announcements by Mike Roach that the first unit can meet federal new source performance and Montana emission (air) standards is indeed heartening. However, the crucial test will come with time, (maybe a year from now) when operation stress begins to affect control efficiencies, to a greater or lesser degree. Timothy W. Devitt's prepared remark, (Miss., 2/20/76, p. 1) that plans show, "a system with a guaranteed average sulphur-dioxide control efficiency of about 40 per cent" is hopefully demonstrated. Monthly source emission tests, conducted by the utilities corporation, but monitored by the agency is a good idea; however, the crucial matter still is the ambient concentration, (of a given substance) since all existing stacks may be in compliance with existing emission regulations yet spew out trace elements like selenium. This material is not subject to human law, but is regulated by natural principles; with time it, (or other non-regulated trace elements) could accumulate to levels having a detrimental influence on the surrounding ecosystem and subsequent cycling of this element. Human activity, eg. electrical generation via coal, can release selenium (Se) at rates which cannot be incorporated into the natural cycles. Part of this load will appear in the adjacent water courses. This excess is shown by, "the combined atmospheric and slag pond discharges [which] are approximately 2.5 and 1.5 times larger than river mobilization for the U.S. and the world, respectively" (1). Thus, the above news releases are not necessarily grounds for rejoicing, as will be shown below.

During the combustion of fossil fuels SO_2 and SO_3, (an acid-rain precursor) are formed in an approximate 25-30:1 ratio, respectively. Federal 3-hr. ambient standards allow up to 0.50 ppm of the former, although a concentration only 0.05 ppm greater for the same time period may cause chronic damage to sensitive species like Pinus ponderosa, resulting in reduction of both photosynthetic and growth rates. The 24-hr. Montana state max. mean of 0.10 ppm (or federal 0.14 ppm std.) could conceivably include an 8-hr. cumulative, (not continuous) exposure of 0.25 ppm SO_2, the injury threshold to flora, as shown by affected mesophyll layers in middle-aged leaves, (2).

This says nothing about either O_3-SO_2 or NO_2-SO_2 synergy which will be present at various times during the plant's operation, nor does the law allow for changing sensitivity to certain phytotoxic gases with changing climatic conditions, (eg. light intensity, relative humidity, temperature) or soil (eg. moisture) conditions. Ibrahim J. Hindawi, (an EPA plant anatomist) testified, (Misc., 2/20/76, p. 1) that a reduction in grain crop yield without visible injury was possible, especially if fumigated at the blossom stage. This apparently is a reference to M.P. Thomas, Effects of Air Pollutants on Plants, W.H.O. monograph series #46, Columbia U., N.Y., 1961. One may also consider Dr. C.C. Gordon's 1972 Mt. Storm, West Virginia study where damage to pine and spruce species occured even though the SO_2, NO_x federal ambient standards were rarely exceeded.

In the summary volume of the DNRC's environmental impact statement, a MSU meterology study is cited. It notes that stable atmospheric conditions are frequent in all seasons, and that ground-based inversions and/or isothermal layers existed at Colstrip almost daily during the near dawn hours. More importantly, the document stated that operation plumes, "may be contained within the near dawn inversion layer about 40% of the time", (summary vol. p. 111). In another portion of the report, (vol. 3-A, chap 10, p. 285) it is stated that the, "length of time that fumigation conditions can persist in the Great Plains is unknown, (Northern Great Plains Resources Program, 1974). However if that period approaches one hour the Montana State Standards may be approached on about 5% of the days per year". During the morning burn-off period, the area could be subject to chronic, (largely "legal") fumigation, producing slow but insidious damage to vegetation at distances possibly up to 50 miles from the plant. Obviously, if acute fumigations occur, one will witness floral disturbances, (in given species' distribution) in terrestrial and aquatic forms due to the presence of SO_2 and heavy metals, as seen in studies around the copper smelters in Sudbury and Falconbridge, Ontario, (3) or in other places much closer to home. Changes due to chronic stress, (eg. the Brookhaven Nat. Lab.,N.Y. forest study with a 9500 curie ^{137}Cs source) can be observed in decreased photosynthesis rate relative to that for respiration. Trees have a respiratory area (bark) greater than that for photosynthesis, thus are more susceptible to pollutants than floral, (largely herbaceous) species of lesser stature. Reduction, (be it long or short term) in community diversity can increase nutrient loss, (witness nitrogen and cation losses from a clear-cut, (4)). G. M. Woodwell amplified this fact, stating tat any,"chronic pollution that affects the structure of ecosystems, especially the plant community starts leaks [in the nutrient pool] that reduces the potential of the site for recovery", (5). Pollution and succession act on the same time scale, we can't depend upon evolution to cure this set of problems . One will see a shift from specialty to generality in species' ecologic functions, (or niche), eg. the appearance of organisms like sewage algae or cockroaches who are unaffected by almost everything. More concretely, a regression to more early seres, (stages of ecologic succession) will occur-trees being replaced by shrubs, being replaced by herbs, being replaced by mosses, until only the lowly, rarely resistant lichen remains.

One of the more subtle (initially, anyway) influences on the surrounding ecosystem will be the presence of trace elements.

emitted as part of the flue gas, fly ash and that leached from the scrubber slurry and bottom ash from the settling-recycling ponds. A case in point is selenium, (in group VI of the periodic table, along with sulfur and tellurium) whose presence must be aquatic before it is regulated. A Public Health Service standard exists for drinking water, (0.01 mg/l) but its influence on the area's public water-supply is uncertain. Disagreement exists between the Rosebud Protective Association and Montana Power Company over the sealing abilities of the clay used to "cork" the above ponds during use and after they are no longer operational. The Se present in the pond wastes could possibly migrate through the sealant and enter into the area's ground-water, and thus contaminate the water supply for domestic and agricultural purposes. The element's carcinogenic/anti-carcinogenic potential (s) in humans is still debated. However, this element can interfere with biological processes eg. enzyme systems, thus must be considered a hazard. Hopefully, the DHES will diligently monitor the ground-water after start up of the sludge disposal areas.

Many of the trace elements, (from the coal) are concentrated in the ash, thus flora used to revegetate the no longer usable ponds could absorb some of them if the physico-chemical conditions are "right", eg. see figure 1, attached sheet. Given the calcareous, slightly alkaline, oxidizing conditions present in the Colstrin area, the above figure implies that Se would be available as selenate ion, a form that can be incorporated into plant tissue. Recently, a New York study of several species of sweet clovers', selenium content, (grown on two sites where the parent material included seleniferous coal ash) showed their ability to concentrate toxic levels, (14, 69 ppm dry wt. vs. 22.9, 21 ppm soil) of this element. Animals, (grazing stock) can tolerate 2 to 5 ppm in their diets, (over periods of several months) before symptoms of chronic toxicity are noted, (6). When cabbage, (*Brassica oleracea*) was grown in the Lansing landfill material, (above, 22.9 ppm), it contained 0.2 to 3.7 ppm, (dry wt.) vs. 0.05 ppm in the control, (Teel silt loam, pH 7.2). It must be pointed out, however, that Northeastern U.S. soils are habitually low in this element, thus numerical comparison is risky. It is interesting to note that the, "correlation coefficient (r) between the concentration of selenium in the fly ashes and that in the respective cabbages grown thereon was .89, being highly significant at the 1 per cent level"(7).

A selenium burden to the soil, (and consequently to plant-animal life) is also a possibility. A comparison with the Pacific Power and Light's Glen Rock, (Dave Johnston) plant may demonstrate this point:

(1) Dave Johnston: unit #4 is a tangentially-fired, balanced draft 330 MW boiler with 3 Venturi scrubbers, (source (8), fig. 2-1, p. 5) with the following materials balance, (source (8), table 2-1, p. 10): $2.83x10^5$ (±10%) lbs/hr., $1.65x10^2$(±10%) lbs./hr. fly ash, $5.01x10^7$ scf/hr., (±10%) flue gas.

(a) proximate coal analysis, (source (8), vol.2, table 4-1, p. 31):

26.95% HOH
15.06% ash
31.13% volatiles
26.86% fixed carbon

0.52% sulfur, with 6948 Btu/lb as received. This is subbituminous coal, with 2.2 ppm Se content.

(b) selenium balance (source (8), vol.1, table 4-1, p.20):

Input. 0.88±0.07 lbs/hr. vs. Output: 1.0±0.1 lbs/hr., with 2.2% in flue gas, 0% in bottom ash, 97.3% in the economizer ash and scrubber slurry. As is true for As, B, Co, Cu, F, Hg, S and V., Se is enriched in the flue gas and depleted in the bottom ash. This contrasts to Ba, Ca, Fe, which are evenly distributed among the various ash types.

(2) Colstrip: a modified-tangential system, (DNR, source (9), vol. 3-A, p. 228) with Venturi scrubbers, (Chap. 6, p. 68 in vol. 3-A):

(a) proximate coal analysis (Rosebud and McKay seams):

25.60% HOH 9.60% ash 27.90% volatiles 35.10% fixed carbon	this represents a weighted average of 3 areas, having 0.84% S and 8438 Btu/lb.
25.65% HOH 10.16% ash 29.70% volatiles 34.47% fixed carbon	this represents the composition of 69% of the total coal consumed, having 0.89% S and 8383 Btu/lb.

The heterogeniety of the coal, "at the scale which influences hourly, daily, and monthly emissions and other variables is unknown", (source (9), Vol. 1 p. 79).

(b) Se analysis:

The heterogeniety noted above is reflected in the Se data given below on a dry weight basis(ppm) as given in Vol. 3-A, p. 207):

	USGS	MSU
max.	2.1	5.1
min.	<0.1	<0.06
mean	0.6	1.6

Table 6-2, (source (9), summary vol.) listed the estimated emission rate for either units 3 or 4 as:

assumed conc.	100% cap. feedrate	% emitted	100% cap. emission in lbs/hr.
1.0 ppm.	0.672 lbs/hr.	10	0.0672

Consider the following data:

Colstrip	Dave Johnston	
1.0 ppm (from table 6-2)	2.2 ppm (1-a)	coal (Se) conc.
0.0672 lbs/hr.	1.016/hr/330MW	emission rate

Apparently, the Wyoming facility uses coal containing 2.2 times the Se, (as does Colstrip), yet emits $2.12\text{x}10^0$ lbs/hr (on a 700MW basis)$\div 6.72\text{x}\ 10^{-2}$ lbs/hr or 31.5 times this element although the systems are surely not radically different, (to my understanding of the respective plant descriptions.) This number is hardly an exact value, but is submitted as empirical data that apparently runs contrary to those assumptions used to calculate the 10% emission rate, (source (9), summary vol. p. 84).

A.W. Anders et al, (10) studied the Allen Steam Plant in Memphis, Tenn.; the plant consists of a cyclonic boiler, (100 tons/hr. coal feed) with Lodge Cottrell electrostatic precipitators. The following Se balance was observed: 0.3% in the slag, approximately 68% in the fly ash and the rest vaporized, thus, "approximately 93% of the Se emitted to the atmosphere is found in the vapor phase", (source (10), p. 857) and in the form of elemental selenium (Se^o) arising from the speculated reactions:

i) $SeO_2 + 2SO_2 \longrightarrow Se^o + 2SO_3$

ii) $H_2SeO_3 + 2SO_2 + HOH \longrightarrow Se^o + 2H_2SO_4$

Inspection of figure 1 indicates that for the given Colstrip environment the innocuous Se^o would be quickly oxidized to a selenite: selenate mixture and would rain over the area, having a distribution, (but hardly concentrations) similar to the seasonal SO_2 isopleths, (source (9), vol. 3-B, figs. 11-8 to 11-11). Due to its chemical similarities to both As and S, it certainly will become entangled in the metabolic pathways of the ecosystem downwind of the stack, where prediction of the magnitude of the effect is difficult to presently determine. When all the trace elements are viewed collectively, the generation facility becomes an experiment of sorts, but contrary to Anaconda, Mont., or Sudbury Ont. we can take consolation in documenting the changes that occur-to study one of the economic "externalities" of the cost of producing electricity.

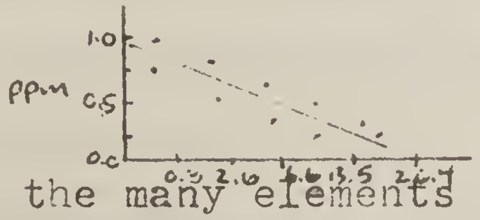
This proposed study is not unique, and the inclusion of several done in the past seems in order:

(1) The trace metal content of plants in San Juan Co., New Mexico was found to be low, (relative to national averages) in 1961-2,"and the effluent from thepower station has raised the content to above normal levels only in the immediate vicinity of the station", (source (11), p. 1). The change in water availability or perhaps certain elements or compounds in the fly ash has stimulated certain species of saltbush(Atriplex),"that normally form a mat cover about 3 inches in height, to grow luxuriantly into large succulent shrubs to 1 to 2 miles west of the power station", (source (11), p. 3). Members of this genus can absorb moderately high amounts of Se, (if it is in turn present in moderate amounts in the soil); source (9), appendix D-2, p. 14 indicates that two such species are present, A.canescens, A. nuttallii. Inspection of table 6, p. 36, (source 11) shows the following Se data for Four Corners:

1961	1971
0.61 ppm (mean)	0.65ppm (no mean noted)

The above are on a dry weight basis. Unfortunately, the lack of a mean value for the more recent data makes any comparison difficult, if not impossible; other elements, (eg. Cd, Cu, Sr, V, source 11, p. 37) do show an increase with time. These concentrations, (in terms of plant-soil relationships) must be taken with caution, since: a) the average uptake of different ions by differing species varies as a function of how they will be used, b)mineral tolerance and/or need varies with the given species, c) that part of the plant which is sampled, (and the season) plus how that tissue is treated prior to analysis. Apparently, the general ecosystem, (around Four Corners) can restrict its cycling of some emitted elements, (eg. B, Ba, Ca, Cu), eg. their concentrations remain below the average for perennial shrubs, except for strontium which is naturally high in the soil and plants of that county.

(2) John R. Keith et al's spectrofluorimetric analysis of sagebrush, (Artemisis tridentata) ash, with the results reported on a dry weight basis, (source (12), fig. 5, p. 23):



$$\log[Se] = -0.04 - 0.45 \log D$$

Of the many elements considered, only a few others have this distribution pattern, including Sr, V, As, Sb, (the latter two from source (13)).

verting this element to a biologically available form and thus increase in abundance of the following species may be of assistance in this matter: goldenweed (Oonopsis condensata), woody aster, (Xylorhizza Parryi), common sunflower, (Helianthus annus) and the apparent non-accumulator, the three leaved milkvetch, (Astragalus gilviflorus). Interestingly, the more complete floral listing, (source (9), vol. 3-B, Appendix D-2) shows no presence of obligate accumulator species, (eg. Astragalus bisulcatus), implying that the soil isn't so naturally seleniferous as to interfere with such monitoring.

In summary, it has been attempted to show that more work needs to be done in order to appropriately evaluate the environmental effects of these units. The discussion of selenium is the case in point, being one of the many potentially toxic trace elements whose movements throughout a given system are so uncertain, eg. mass balances, interrelations with other elements that a "witches' brew" may be present without our realizing it. Conflicting evidence has been brought before the board over the need for this electric power, (eg. A.C. Tsao vs. MPC et al testimonies). Conservatively, it would be in the best interest of the area, (in the long run) to forego construction of these two facilities, (certainly until the influence of Colstrip 1 and 2 are considered as above) or either: (1)declare a 5 or 10 mile "national sacrifice area", concentrating the emissions to such a radius, or (2)reanalyze future power demand to determine whether construction closer to given load centers is indeed more profitable for those investing in this project. Here (in this case), the price of the product would reflect the maximum possible inclusion of the "externalities", i.e. the effect of the above substances on an ecosystem, including humans and

Earlier work by R. R. Ruch et al, (14) has shown that the concentration of Se, (as well as for Pb, As, Cr, S) is inversely proportional to the average particle diameter emitted. It would be of interest to study the size distribution (frequencies) of the particulate matter to see how much of it will fall within the human-health significance range (5µm-0.5µm) and thusly estimate the potential health problem of that Se which penetrates to the lung air spaces and remains there. Hopefully, Q.R. Stahl's remarks about the wet scrubbers and electrostatic precipitators effectiveness in achieving control of selenium will hold true, (15) and that this element will not become a problem.

Inspection of the vegetation map, (source (9), summary vol., ff. p. 132) shows no major big sagebrush-grass or silver sagebrush-grassland habitats directly downwind of the modeled emissions, so citing source (12) may not seem pertinent, however, they do contain Western wheatgrass which can absorb moderate amounts of Se, (16), possibly to levels that are toxic to grazing animals. Visual symptoms of Se excess, (to the best of my knowledge, see source (17)) have never been observed in the field where the soils are naturally seleniferous, (including large portions of the Fort Union Basin). The damage (due to legally acceptable stack emissions) could well go unnoticed until it become a grazing stock illness problem. A quick review of source (9), vol. 3-A, p. 408 shows that poisonous plant species are not a real problem at present. Locoweed is in the area and is capable of accumulating selenate ion, but rarely to toxic levels per se. A rule of thumb analysis, (in studying the slow change in flora abundance and distribution downwind of the units) might be to observe those species capable of con-their endeavors. The answer to the question, "do the benefits outweigh the risks?" is presently obvious. However, Montana has before it the opportunity to measure these (costs and benefits) more closely, to determine the best course of action which will be in the best interests of everyone, inside and outside of this state. We will never have enough information to make the "Right" decision, but we should withhold action until a good approximation of it exists. I, for one, am not convinced this is presently the case, thus it is respectfully submitted that these plants not be constructed until further long-term studies are completed on the existing units.

Literature Cited

(1) Andren, Anders W., Klein, David H, Talmi, Yair, "Selenium in Coal-Fired Steam Plant Emissions", Envirn. Sci. and Tech. 9 (9) pp. 856-858, 9/75.

(2) Staff, Southwest Energy Study, Appendix (H-2) Report of the Biota Work Group, Draft: 3/72.

(3) Gorham, Eville, Gordon, A.G., Canadian Journal of Botany 38 (3), pp. 307-312, 5/60; CJB 38 (4), pp. 477-487, 7/60; CJB 41 (3), pp. 371-378, 3/63.

(4) Bormann, F. H. et al, "Nutrient Loss Accelerated by Clear-cutting of a Forest Ecosystem", Science 159, p. 882, 1968.

(5) Woodwell, G. M., "Effects of Pollution on the Structure and Physiology of Ecosystems", Science 168, pp. 429-433, 4/27/70.

(6) Allaway, W. H., et al, "Movement of Physiological Levels of Selenium through Plants to Animals", Jour.of Nutrition 88 (4), pp. 411-418, 4/66.

(7) Gutenmann, Walter H. et al, "Selenium in Fly Ash", Science 191, p. 966, 3/76.

(8) Radian Corp., Coal Fired Power Plant Trace Element Study, vol. 1 A Three Station Comparison, Prepared for the EPA, region VII, Denver, Col, 9/75.

(9) Staff, Draft Environmental Impact Statement on Colstrip Electric Generating Units 3 and 4, 500 Kilovolt Transmission Lines and Associated Facilities, Energy Planning Div., Mont. State Dept. of Natural Resources and Conservation, Helena, Mont.,11/74.

(10) See source (1), p. 857.

(11) Cannon, Helen L., Anderson, Barbara M., "Trace Element Content of the Soils and Vegetation in the Vicinity of the Four Corners Power Plant", Southwest Energy Study, Report of the Coal Resources Work Group, AppendixJ-III, 2/72.

(12) Keith, John R. et al, "Trace Metal Variation in the Powder River Basin", p. 14 in Geochemical Survey of the Western Coal Regions, First Annual Progress Report, U.S.G.S., Open-File Rep. No. 74-250, 7/74.

(13) Anderson, Barbara M. et al, "Antimony, Arsenic, Germanium, Lithium, Mercury, Selenium, Tin and Zinc in Soils of the Powder River Basin", p. 50, 2nd Annual Report see source 12), 7/75. This paper includes a reference to work in progress by Jon J. Connor et al on the selenium content of sagebrush which is now in press, USGS Res. 4 (1), 1976,

(14) Ruch, R.R. et al, "Occurrence and Distribution of Potentially Volatile Trace Elements in Coal", EPA-650/2-74-054, 1974.

(15) Sittig, Marshall, Pollutant Removal Handbook, Noyes Data Corp., Park Ridge, N.J., 1973, pp. 460-2. Quotes an unreviewed (by author) paper by G.R. Stahl, "Air Pollution Aspects of Selenium and its Compounds", Report PB 188,077, NTIS, Springfield, Virginia, 9/69.

(16) Searight, W.V. et al, "Detailed Mappings of Seleniferous Vegetation on Soils of Pierre Origin", Proceedings of the South Dakota Academy of Science 26, 10/1/47, pp. 37-98.

(17) Ganje, Tony, "Selenium", chap. 28 in Chapman, Homer D. (ed.), Diagnostic Criteria for Plants and Soils, Quality Printing Corp., Abilene, Tex., 2nd Printing, 1973.

Literature consulted, but not used

(1) Chanlett, Emil T. Environmental Protection, McGraw-Hill Series in Water Resources and Environmental Engineering, McGraw-Hill Book Co., 1973, particles and respiratory sys., p. 206, pollution control efficiencies, fig. 5-14, p. 260.

(2) Edmonds, Peter M. Testimony at the Board of Natural Resources and Conservation Hearings, Helena, Mont., 1/29/76. Sections on Trace Elements in the Particulate Fraction, pp. 30-33 and on Selenium, p. 40.

(3) Andren, A.W. etal, Physical and Chemical Characterization of Selenium in Coal Fired Steam Plant Emissions, Draft, O.R.N.L., Oak Ridge, Tennessee.

(26) Schulek, E., Körös, E. J. Inorg. Nuc. Chem. 13. 58-63 (1960)
(27) Shrift, A "A Selenium cycle in Nature", Nature 201: 1304-05 (1964)

for Mn^{2+} and Fe^{2+} are maximum values reported by Leeper (17), while the activity for Se ions is an average, selected by Lakin (13). The Cu^{2+} activity value is based on soil solution data reported by Hodgson and Geering (11), and the Cu^{+} activity is a calculated value to allow the Se°/Cu_2Se couple to be represented by the same line as the Se°/CuSe couple.

From Fig. 3 one can see the regions of Eh and pH where one might expect to find one or another valence state of Se existing in the soil solution. In the region between the lines drawn for the O_2/H_2O couple and the SeO_4^{2-}/SeO_3^{2-} couple, one might expect essentially all of the Se in solution to be in the selenate form. Between the SeO_4^{2-}/SeO_3^{2-} and $SeO_3^{2-}/Se°$ lines, SeO_3^{2-} would be expected. Between the SeO_3/Se° and the H^+/H_2 lines, only elemental Se and possibly some heavy metal selenides would be expected. No H_2Se by itself would be expected to exist in soils, except either in a metastable state (14) or in concentrations very much less than $10^{-7}M$, inasmuch as this redox couple falls even below the H^+/H_2 couple.

While the redox potential of a soil may indicate what to expect regarding the valence state of Se in a soil, it yields little information about the kinetics or rates of conversion from one oxidation state to another. Experiments and observations with pure systems in the laboratory indicate that the rates of transformation of SeO_3^{2-} to SeO_4^{2-} and vice versa are relatively sluggish (25), whereas the rate of transformation of SeO_3^{2-} to Se° proceeds very readily. On the other hand, the oxidation of Se° to SeO_3^{2-} is very difficult to effect, unless Se° is finely dispersed (26).

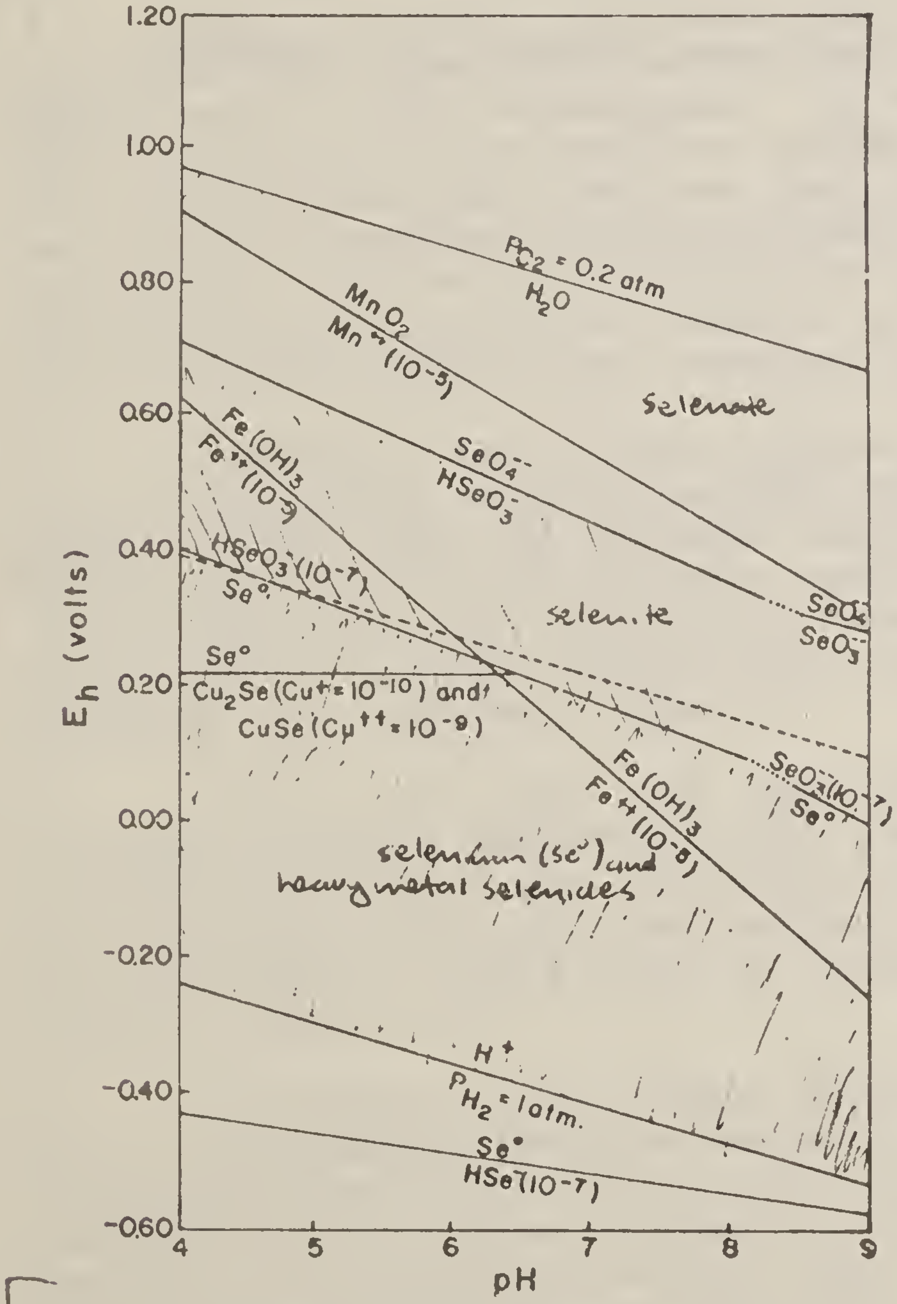


Fig. [illegible]—The oxidation-reduction potentials of selenium couples and some redox couples that could affect the oxidation state of selenium in soils as a function of pH. (Dashed line is Pearsall's (23) dividing line between oxidized and reduced soils.)

Oxidation of Elemental Se in Soils

From these observations on reaction rates, the question arises—Why does not all the Se in the soil end up in the elemental form? The answer to this question appears to lie in the possibility that certain catalytic agents in the soil and/or microbes expedite its conversion to more soluble forms. Evidence for the latter has been cited by Shrift (27), who proposes that there may exist a natural biological Se cycle just as there exist cycles for carbon, nitrogen, and sulfur. The crucial point in his Se cycle, however, is the reactivation of elemental Se by microbial oxidation.

Recent studies on the oxidation of Se° by O_2 (9) and on the hydrolysis of Se° in aqueous solutions (26) indicate that the susceptibility of Se° to oxidation is dependent on its allotropic form and how finely it is subdivided. The red and black amorphous allotropes (9) are found to be the most readily oxidized, while the gray-hexagonal allotrope is found to be the most inert. The red and black amorphous allotropes are also the most likely forms of Se° to occur in the soils. Red amorphous Se° originates initially when Se° precipitates in aqueous solution. At temperatures > 30C, red amorphous Se° gradually reverts to black amorphous Se° (10). This latter form appears to be an indefinite transition stage between red amorphous Se° and gray-hexagonal Se°. The reactivity of the black amorphous Se° very likely decreases with time by the degree to which it approaches the molecular structure of the gray-hexagonal allotrope.

In an attempt to illustrate the oxidation of elemental Se in soils, carefully prepared colloidal Se was added to 5-g samples of a Mardin silt loam at pH's 5.0, 5.9, and 6.7. The elemental Se° was prepared by acidifying a K_2SO_3 solution of Se° with HCl to a pH of 4. This procedure (30) provided a clear, dichromate-colored sol of red amorphous Se whose particles were < 1μ. The sol was dialyzed against distilled water to remove K_2SO_3. After an incubation period of 5 weeks, the soils were extracted with 0.08M KH_2PO_4 + 0.4M K_2SO_4. The extracts were analyzed for Se by the method of Allaway and Cary (2). The pH of the extracting

Table 3—Oxidation at 28C of 29.3 μg of elemental selenium by 5 g of Mardin silt loam at pH 5.0, 5.9 and 6.7 during a 5-week incubation period.

Treatment	μg selenium extracted by 25 ml of 0.08M KH_2PO_4 + 0.4M K_2SO_4 at: pH 5.0	pH 5.9	pH 6.7
I. a. Se°	1.17	1.75	2.33
b. Se° + Toluene	0.67	1.08	1.25
II. c. Se° + MnO_2 (20 mg)	1.58	2.25	2.82
d. Se° + MnO_2 (20 mg) + Toluene	1.08	1.42	1.92
III. e. Se° + H_2O submerged	0.92	0.92	0.92
f. Se° + H_2O submerged + Toluene	0.75	1.25	1.58

W.H. Pearsall, J Ecol. 26: 180-193 (1938); dissoc. constants for copper selenides found in E.A. Buketov et al, Russ. Jour. Inorg. Chem. 9: 272-294 (1964). J.F. Hodgson et al, Soil Sci. Soc. Am. Proc. 29: 665-669 (1965).

HEARINGS EXAMINER: You may cross-examine.

MR. BELLINGHAM: I have no questions.

HEARINGS EXAMINER: Very well, Mr. Cornish, your sworn testimony will go to the members of the Board.

(WITNESS EXCUSED.)

SAM H. SPERRY, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF SAM H. SPERRY WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16

MARCH 16, 1976

STATEMENT OF SAM H. SPERRY
1823 Highland
Helena, Montana 59601
Telephone: 443-2749

Related Affiliations:

Co-Chairman, Montana League of Conservation Voters

President, Last Chance Audubon Society, Helena

STATEMENT:

While I do not represent the two organizations listed above, I wish to cite them in order to indicate the major source of my concerns expressed in this statement. By virtue of my leadership positions in the Audubon Society and the League of Conservation Voters I have, over the past three years, become increasingly aware of activities surrounding wastewater treatment by municipalities and I have become more and more concerned that we in Montana are not doing all that is possible to decrease the electrical demands of our treatment plants when, it appears to me, alternative power sources are feasible and available.

Although I am not an engineer nor am I technically skilled in areas necessary to the complete understanding of technical data dealing with methane gas and methane fertilizers, I nonetheless am convinced after reading a considerable amount on the subject that there are alternative sources of energy inherent in our municipal wastewater treatment processes which could be used in lieu of electrical power to operate our treatment plants.

I have just this week read an article in the journal of the National Audubon Society concerning the progress made by the NRG Fuel Company in California. Their sanitary landfill gas conversion plant is producing one million cubic feet of methane daily and has the immediate potential of six million cubic feet of methane daily, enough to supply a city the size of Reno. (1).

According to Dr. Donald Klass of the Institute of Gas Technology "... a perpetual methane economy is possible...." given the present technological state of the art (2). Dr. Klass goes on to indicate the methods currently available for the conversion of non-fossil carbons to methane or synthetic natural gas. He also notes that the Institute of Gas Technology's Biogas Process is ".. only a step or two downstream from the non-carbon fossil form."

In a paper presented to the American Chemical Society, Dr. Klass indicates that a prime source of non-fossil carbon is organic wastes (3). He says that "... organic wastes offer a significant source of synfuels...

Dr. Klass also indicates that in 1971 we in the United States generated 880 x 10 (to the 6th power) tons of organic waste which has the potential of 8.8 x 10 (to the 12th power) cubic feet of synthetic natural gas, had we converted it (4).

Allen Cywin, in an article in the journal Energy, Agriculture and Waste Management, notes that methane collection can supply " a significant percentage of the energy needed..." for water treatment plants, (6).

In addition to the use of methane gas to power waste water treatment plants, there seems to be many other actions we can take to significantly lower. the electrical demands of these plants in our municipalities.

Senator Muskie intorduced into the congrassional record on November 13, 1975 an article by Harold Leich which describes methods of developing home methane generators and the use of aerobic tanks and vaccum systems as alternatives to present-day energy-demanding municipal disposal systems. (7).

Of course the ever present dream of solar energy is to be considered also. The Newsletter of the Maine Audubon Society for December 1975 included an article describing the the use of solar energy to power a municipal wastewater treatment plant in Maine.(8).

In conclusion it seems to me that we have a myriad alternatives available and feasible which we should explore and/or implement prior to building more power generators which use fossil fuels. Wastewter treatment plants do demand large quantities of power, but it does seem that they can be made to practically operate themselves and thus contributing to a real concept of energy conservation in this country.

REFERENCES:

(1) AUDUBON , March 1976. Page 140.

(2) A Perpetual Methane Economy - Is It Possible? from Chemical Technology, Vol. 4, No. 3, March 1974.

(3) A Long-Range Approach To The Natural Gas Shortage Utilizing Nonfossil Renewable Carbon. A paper presented at the 169th Natinnal meeting Of the American Chemical Society. April 6-11, 1975.

(4) A Long-Term Solution To Fossil Fuel Depletion. A paper presented by Dr. Donald Klass to the 1975 Winter Meeting of the IEEE Power Engineering Society. January 26-31, 1975

(6) Energy Impacts of Water Pollution Control. From Energy, Agriculture and Waste Management...Proceedings of the 1975 Cornell Agriculture Waste Management Conference.

(7) Congressional Record - Senate for November 13, 1975. S19903.

(8) Solar Powered Sewage. From Maine Energy Options by the Maine Audubon Society. December 1975.

HEARINGS EXAMINER: Do you have a copy of his statement?

MR. PETERSON: I don't even know his name.

HEARINGS EXAMINER: Mr. Sam H. Sperry. We'll get you a copy if you haven't got one.

EXAMINATION OF SAM H. SPERRY

Cross, by Applicants

By Mr. Peterson:

Q In your statement, Mr. Sperry, you are advocating the use of having the waste water treatment plants to come more or less self-sufficient in use of energy for the operation of those plants?

A Yes, sir.

Q What is the time frame that you speak of in your last paragraph relative to exploring and implementing that innovation?

A To the extent that I'm knowledgeable from what I've read in the last few years, and certainly in the last few months, these particular processes are already implemented and operating in other parts of the country; so I would assume that the same processes could be implemented in Montana within the immediate future.

Q Are you competent that the situation you site here in California is comparable to that of what we have in Montana?

A I'm not sure I understand your use of the word "situation."

Q Well, as I understand the statement here, you say, "Their sanitary landfill gas conversion plant . ." in which they create methane, is used then to produce the energy to run the waste water treatment plant; is that right?

A That is correct.

Q And, have you done any study as to whether or not that sanitary landfill conversion plant could be operable in Montana?

A No.

MR. PETERSON: I have no further questions.

HEARINGS EXAMINER: Very well, sir. Your testimony will go to the Board. You understand that it goes to the Board in written form, so you really don't miss anything if you don't get to testify orally.

(WITNESS EXCUSED.)

ROBERT McKELVEY, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT STATEMENT OF ROBERT McKELVEY WAS DIRECTED TO BE INSERTED AT THIS POINT.)

Robert McKelvey   March 16

I am here today to call to the attention of the Board a number of recent studies on the potential of so-called total energy systems or "co-generation" .... highly energy-efficient processes for the joint production of electric power together with steam for industrial use and space heating.. These processes are by nature decentralized and their increasing economic viability strongly implies that large remotely located, single-purpose, generating facilities such as Colstrip 3 and 4 may be becoming anacronisms.

Perhaps the most dramatic endorsement of industry based total energy systems is contained in a recent Dow Chemical-National Science Foundation study. The Energy Industrial Center Study summary was prepared by Paul W. McCracken, the distinguished economist; William G. Rosenberg, Chairman of the Michigan Public Service Commission; and Gerald L. Decker, Utilities Manager for Dow. In it they state:

"Wherever industrial steam is generated there is potential opportunity for generating electricity as well. By raising the steam ... -pressure and temperature above that required for industrial use and bringing them back down to required levels through a turbine coupled to a generator, an industrial plant can produce electrical power. It has been known for many years that the additional fuel consumed in this process would be as little as half of that required to produce the same amount of power at the most efficient central station power plant. Similar fuel savings could be achieved by supplying process steam to industry from utility central station power plants." (1)
(e.g. prior to 1950, NW wood product industry produced 30% of its own electricity)

The Study goes on to say, "Reduction in fuel use through the generation of by-product electricity by industry could be the equivalent of 680,000 barrels of oil per day by 1985. Alternatively, the development of central power stations which furnish steam to industrial customers after its use in the generation of electricity could produce national savings equivalent to 535,000 barrels of oil per day by 1985. (The Study suggests that using combined implementation, industry could be generating 32.5% of its requirements for electricity and acquiring 51% of its process steam requirements by 1985). The Study also conc
= 71,000 MW
= 13% of Nat'l energy use

CONSUMPTION THE UNITED STATES COULD SPEND FROM $2 BILLION TO $5 BILLION LESS PER YEAR ON NEW GENERATING FACILITIES, THUS FREEING RESOURCES VALUED AT $20 TO $50 BILLION OVER THE 1976-1985 PERIOD FOR USE IN OTHER PARTS OF THE ECONOMY. THIS CONCLUSION IS ESPECIALLY SIGNIFICANT AS THE NATION BEGINS TO IDENTIFY A NATIONAL SHORTAGE OF CAPITAL FUNDS. EXTERNAL FINANCING REQUIREMENTS OF INVESTOR-OWNED UTILITIES COULD BE REDUCED BY APPROXIMATELY $4.1 BILLION PER YEAR OVER THE NEXT 10 YEARS IF INDUSTRIAL GENERATION OF BY-PRODUCT POWER CAN BE INDUCED. ALTERNATIVELY, THE DEVELOPMENT OF DUAL-PURPOSE CENTRAL POWER STATIONS COULD REDUCE THESE REQUIREMENTS BY $2.8 BILLION ANNUALLY. THE AGGREGATE COST OF GENERATION AND DELIVERY OF ELECTRI ENERGY TO RESIDENTIAL, COMMERCIAL AND INDUSTRIAL CUSTOMERS CAN BE REDUCED BY AMOUNTS RANGING FROM 2.9% TO 6% UNDER VARIOUS ALTERNATIVES. THIS SHOULD BE COMPARED WITH THE STUDY'S BASE CASE FORECAST IN THE ABSENCE OF ANY IMPLEMENTATION OF THE VENTURES WHICH INDICATES THESE COSTS WILL RISE AT AN ANNUAL RATE FOR ALL CUSTOMERS OF 6.8% THROUGH 1985. THE RESIDENTIAL CONSUMER'S ANNUAL ELECTRIC BILL, AVERAGED OVER THE PERIOD 1976-1985, COULD BE $31.20 LESS IF THE INDUSTRIAL GENERATION OF BY-PRODUCT POWER AND THE CENTRAL POWER STATION CONCEPT ARE IMPLEMENTED. AS THE CONTINUED AVAILABILITY OF OIL AND NATURAL GAS AS A POWER AND STEAM SOURCE BECOMES MORE FRAGILE, INDUSTRIAL CONVERSION TO COAL-FIRED PLANTS WITH FUEL AND OPERATING EFFICIENCIES WELL-SUITED TO BY-PRODUCT POWER GENERATION SHOULD TEND TO ENCOURAGE THESE VENTURES."

THE DOW-NSF FINDINGS ARE DRAMATIC, BUT THEY ONLY ILLUSTRATE AN GENERAL TREND: INCREASING AWARENESS AND APPRECIATION FOR THE POSSIBILITIES OF ENERGY CONSERVATION. IT IS IMPORTANT TO EMPHASIZE THAT CONSERVATION DOES NOT MEAN CURTAILMENT, THAT IS, DEPRIVATION. RATHER IT IMPLIES PRODUCTION EFFICIENCY AND END USE PRODUCT EFFICIENCY.

Cogeneration and TOTAL ENERGY SYSTEMS ARE NOT NEW NOR HAVE THEY BEEN LIMITED TO INDUSTRIAL PLANTS. ON THERMODYNAMIC CONSIDERATIONS THEY ARE THE ONLY WAY TO UTILIZE THE 2/3 OF THE BTU HEAT CONTENT OF FUEL WHICH A SINGLE PURPOSE ELECTRIC GENERATOR SUCH AS COLSTRIP 3 AND 4 SIMPLY WASTES....DISSIPATING IT INOT THE ATMOSPHERE. EARLY ELECTRIC UTILITIES SUCH AS COMMONWEALTH EDISON OF CHICAGO PROVIDED STEAM HEATING ALL OVER THE CITY. CON ED OF NEW YORK IS STILL A LARGE DISTRIBUTOR, BUT NO NEW PLANTS have been built in recent years. Quoting from *Energy for Survival* by Wils Clar

"In contrast the Europeans and Soviets are building and renewing district heating facilities in many of their cities. A team of scientists from the U.S. National Bureau of Standards recently toured apartment buildings in several Soviet cities, and reported that heat for the building was supplied by modern, sophisticated district heating plants (steam only) and by combined district heat/electric power plants.

"The same is true in other European countries. In Sweden the city of Vasteras, with a population of 120,000 is served by a combination electric generating station/district steam plant. Using normally wasted high-entropy heat produced by the oil-fueled electric power plant, residents of Wastaras enjoy cheaper electric rates than are charged in cities where power plants supply electricity only. Other European countries use district heat including France (where several large plants serve Paris) and Germany.

"At present there are approximately 600 Total Energy plants in the United States, ranging in size from a few hundred kilowatts of electrical energy to more than 20,000 kilowatts of electric generating capacity in a few plants like Rochdale Village.

"The World Trade Center, which consumes more electricity (80,000 kilowatts) than cities like Stamford, Conn. or Schenectady, NY, was originally designed by the architectual engineers with a Total Energy power plant supply. When they learned this, Con Ed went into action and offerred the builders of the World Trade Center a special "promotional" package of electric rates....at a cost far below what other New York consumers pay for electicity." (2) ************************************

All these considerations may be especially significant in the Pacific Northwest, for it is during the next 10 years that the Northwest Utilities are undertaking a major restructuring of their power generating facilities. During that span of time the Northwest Regional power system is to be transformed from one which relied upon hydropower for 83% of its energy in 1975 to one which will be 52% thermal by 1985. The assumption the utilities have made is that this

FROM A SMALL NUMBER OF VERY LARGE CENTRAL FACILITIES, OF WHICH COLSTRIP IS ONE.

THERE IS NO MENTION IN THE APPLICANTS' COLSTRIP ANALYSIS THAT ANY CONSIDERATION AT ALL HAS BEEN GIVEN TO THE ALTERNATIVE OF A DECENTRALIZED SYSTEM OR OF JOINT ELECTRIC/STEAM FACILITIES. (Nor is there mention in Bonneville Power's 1975 impact statement.*) SUCH AN ARRANGEMENT WOULD OF COURSE STRONGLY DISFAVOR LOCATION OF A PLANT AT A REMOTE SITE, SUCH AS COLSTRIP. INDEED, IN VIEW OF ENERGY CONSERVATION IMPERATIVES, IT IS POSSIBLE THAT THE ENTIRE *PACIFIC NORTHWEST HYDRO-THERMAL POWER PLAN OUGHT TO BE RECONSIDERED.

ROBERT McKELVEY
1740 MADELINE
MISSOULA, MONTANA

EXAMINATION OF ROBERT McKELVEY

Cross, by Applicants

By Mr. Peterson:

Q Mr. McKelvey, where do you reside?

A At 1740 Madeline in Missoula.

Q What is your occupation, sir?

A I am a mathematician; I teach at the University of Montana.

Q How long have you been at the University, sir?

A Since June, 1970; prior to the I was on the faculty at the University of Colorado for 14 years.

Q You've lived in Montana approximately 5 years then?

A Five or six.

Q Well, now, most of your statement consists of quotes taken from articles and so forth, is that right?

A The bulk of the statement, yes; quotes, relevant points from recent studies, which I then attempt to tie in with the Colstrip decision.

Q Now, you've attached, have you not, a --

A And the attachment is the summary of a report on the Energy Industrial Center Study performed for the National Science Foundation last year by Dow Chemical Company.

Q Where do you refer to that in your written statement?

A It's -- perhaps it would be helpful, since you apparently haven't had an opportunity to see this before, if I make a brief explanation of what it's about.

Q I've seen your written statement, if that's what you mean.

A It's referred to in the very second paragraph, to begin with.

MR. BELLINGHAM: At this time we move to strike the annex, Energy Industrial something study, that I can't read because it's not plain; for the reason that it's hearsay and does not give us an opportunity to interrogate the authors of the particular study and an improper foundation has been laid.

HEARINGS EXAMINER: Is this the Dow study that you're referring to?

WITNESS: Yes, sir, it is.

HEARINGS EXAMINER: Very well. The motion to strike the study that you've attached will be granted, and I'll explain to you why, sir. The entire Dow Chemical Report has been offered in evidence here and a summary of it has already been admitted in evidence here and gone over with counsel on both sides, and I've admitted portions and not admitted portions heretofor. So it would encumber the record; and in addition, the rules of procedure of the state of Montana do have a provision that says, if any study or articles are offered in evidence, they can only be offered through -- if the author thereof is present. So actually you have a summary written by one person of a study made by someone else, so I'll have to rule that it will be stricken.

WITNESS: Very well. I'm very pleased that this report has come to the attention --

HEARINGS EXAMINER: Yes, it has come to the attention of the hearing and portions of it are in evidence already.

Q You mention at the very end that's there is no mention of the applicant's Colstrip analysis; and I assume by that that you mean the Westinghouse Report? ". . that any consideration at all has been given to the alternative of a decentralized system or of joint electric/steam facilities." Is that correct?

A Yes.

Q You are referring to the Westinghouse Report?

A As a matter of fact, it seems to me that the energy conservation issues of which this is a major example, have not been dealt with either in the Westinghouse Report, or for that matter, in the report by the Department of Natural Resources; nor, in fact, by the Bonneville Power Administration in its draft Impact Statement concerning the overall Northwest hydro-thermal plant of which Colstrip is, of course, a component.

Q You've taken away my last question. I was going to ask you whether or not that had been dealt with in the Department of Natural Resources Impact Statement, and you've already answered by saying it was not.

MR. BELLINGHAM: I have no further questions.

HEARINGS EXAMINER: Very well, sir. Your testimony will go to the Board and be made part of the evidence in this case.

(WITNESS EXCUSED.)

HEARINGS EXAMINER: Is Mr. Hurley here?

(No response.)

HEARINGS EXAMINER: Is Mr. George W. Thompson here?

(No response.)

HEARINGS EXAMINER: Mr. Steve Goldstein?

STEVE GOLDSTEIN, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF STEVE GOLDSTEIN WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

Testimony of
Steve Goldstein, Executive Director
Montana State Low Income Organization

IDENTIFICATION

I. Mr. Davis and Members of the Board; I am Steve Goldstein, Executive Director of the Montana State Low Income Organization.

II. The Montana State Low Income Organization is a statewide coalition of local low-income groups. The Board of Directors is made up of two delegates and two alternates elected from each local low-income group desiring representation. Incorporated in 1969, the Montana State Low Income Organization attempts to serve and represent all of the over 130,000 disadvantaged people in the State of Montana.

INVOLVEMENT

III. MSLIO has been following the Colstrip project for some time. Our Board of Directors has gone on record in 1974 as opposing the construction of Colstrip Units III and IV. We have reviewed the Department of Natural Resources Environmental Impact Statement, the Westinghouse Report and numerous other statements including the Ken R. White Company Report and the Beisel Testimony. We have testified at the Department of Natural Resources public hearings held around the state and listened with great interest to the ideas expressed by both the proponents and the opponents of this project.

FINDINGS

IV. As an organization of disadvantaged Montanans we are not experts in matters of electrical power generation, environmental degradation, nor utility plant siting. As laymen we are distressed that a number of questions of immediate concern to our membership have not been adequately addressed by either the applicant companies or by the Department of Natural Resources.

Specifically, the following questions have not been adequately addressed:

A. The impact of the Colstrip project on people in the local area who have to live on fixed incomes:

- (1) Impact on the prices of basic commodities and services.
- (2) Impact on rents and housing availability.
- (3) Impact on the availability and cost of medical care services.
- (4) Impact on cost, quality and availability of water, sewer, education, safety and other basic government services.
  - (a) Within the service areas of local governmental units with taxing authority over Colstrip Units, and,
  - (b) In the immediately adjacent service areas of governmental units without the Colstrip Units as a part of their taxing jurisdictions.
- (5) Impacts on the quality of life and healthfulness of the environment for area residents on fixed incomes.

We are concerned with the above impacts as they will affect the local Colstrip area. We feel that a six county area made up of Big Horn, Custer, Powder River, Rosebud, Treasure and Yellowstone counties should be considered to be the area in which the local impacts of Colstrip will be most severe and in which they should have been conclusively studied. This area includes 17 percent of Montana's population, approximately 17 percent of her low-income citizens and the low-income citizens constitute approximately 19 percent of the area's population.

B. Impacts of the Colstrip Project on a larger group of fixed income, low-income, distressed and underprivileged Montanan's.

(1) The impact of the construction of Colstrip Units III IV on the utility rates charged to consumers of electricity in the Montana Power Company Service Area and the areas served by Rural Electric Co-operatives which purchase their electricity from the Montana Power Company.

(2) The impact of both the Colstrip Generating Units and the energy which they will produce on Montana growth patterns and population dispersal.

(3) The impact of hidden and indirect government subsidies (such as those assumed by the Ken White plan for providing newly needed social services in the Colstrip community) on state and federal taxes and on the existing competition for scarce government resources across the state.

(4) The long-term impact of this application on employment opportunities for semi-skilled workers versus all the alternatives to the construction of Units III and IV.

CONCLUSION

Until these questions are addressed and it has been demonstrated that Montana and its low-income citizens will not suffer from adverse impacts we believe that the requirements of the Utility Siting Act (particularly under Sections 70-910 and 70-816) have not been met and this application must, therefore, be denied.

MONTANA STATE LOW-INCOME ORGANIZATION

ACCOMPLISHMENTS

Since its incorporation in July of 1969 MSLIO has provided a vehicle for thousands of Montana's disadvantaged citizens to utilize in getting their views represented at the state and local level. As many as four thousand Montanans have been actively involved in the activities of MSLIO through their membership in MSLIO itself or their representation in MSLIO by elected members of their local groups.

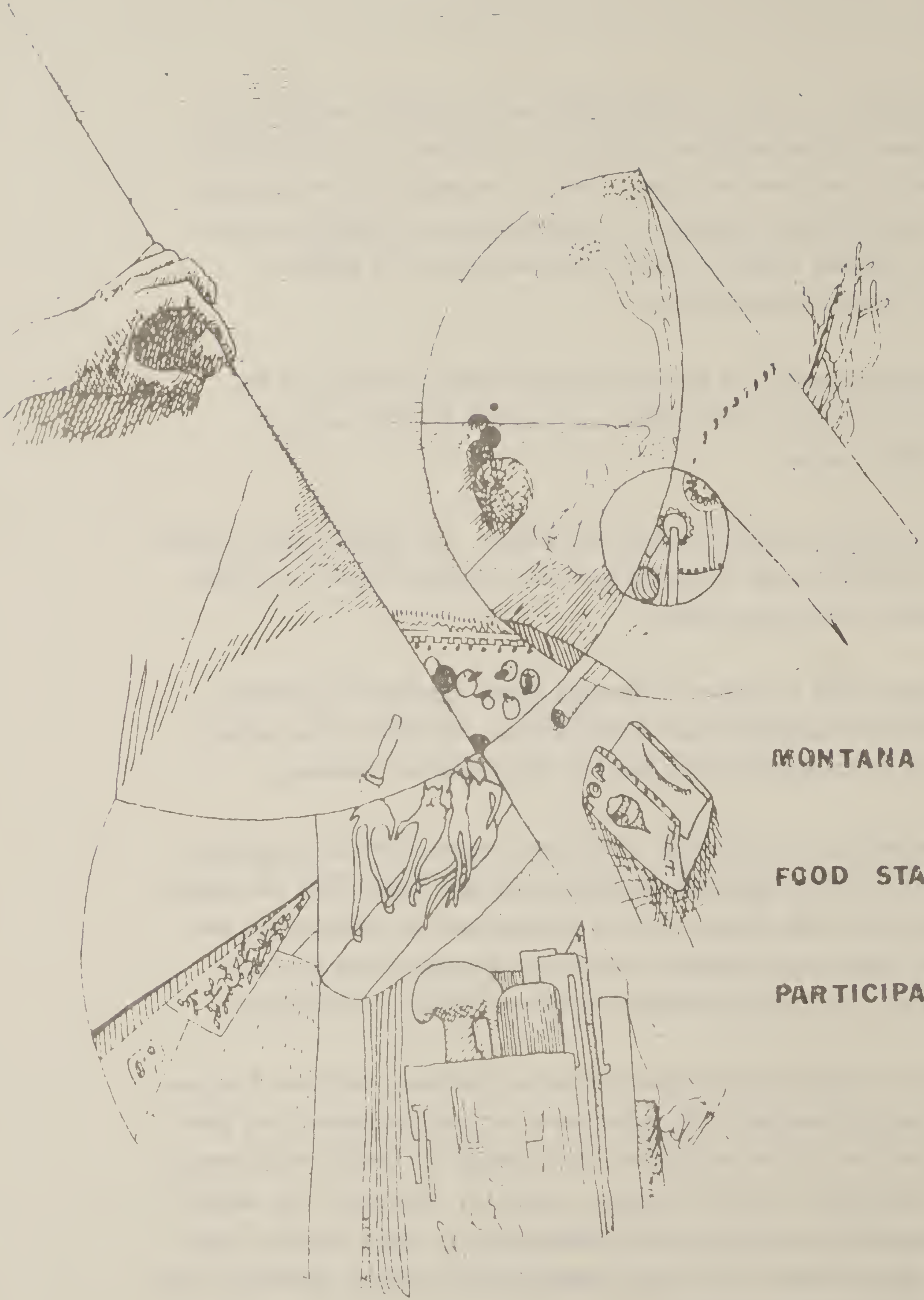
Through its various programs and through the individual efforts of its Board Members it is estimated that MSLIO has touched (helped once or twice) nearly 10,000 people.

MSLIO has operated VISTA programs around the State. The MSLIO VISTA program has just begun its fourth year of operation with eighteen slots for VISTA local volunteers for the current year.

MSLIO has contracted with a number of Montana State Agencies to provide training and technical assistance and consultation services in the areas of Health, Nutrition, Community Organization, Food Stamps, Housing.

MSLIO has been sucessful in achieving low-income representation on policy-making bodies of many state agencies including the SRS Board, the CHP Board, the Manpower Board, the CAP Board, the 4-C's Board and in stimulating the development of the State-wide Housing Coalition to support the Uniform Landlord Tenant Act,...and the Governor's Advisory Council on Poverty.

MSLIO has operated a state-wide Emergency Food and Medical Services Program from July 1971 through December 1973 which sent outreach workers and held workshops to inform low-income individuals and groups of their entitlements in the areas of Foodstamps, School Lunches, Medicare, Medicade, and Social Security. In sucessfully performing the obligations of this and its other grants MSLIO has demonstrated its fiscal responsibility while expending over $200,000 in audited government funds.



MONTANA

FOOD STAMP

PARTICIPATION

March 1975

STATE OF MONTANA

MAIL TO: CAPITOL STATION HELENA, MT 59601

[illegible]

THOMAS L. JUDGE
GOVERNOR

March 24, 1975

It has been more than ten years since the first enabling legislation for the Food Stamp Program was passed. During this time the intent of the Congress has remained constant -- providing an adequate diet for all Americans is not only a moral imperative for the world's most affluent nation; it is a market necessity. Efficient levels of food production cannot be maintained in an economy which casts agriculture adrift on the uncertain seas of simple supply and demand.

Despite the steadfast intent of Congress during the past decade, bureaucratic capabilities have not been equal to the task of carrying out the mandate. For the past five years, the poor of Montana have come together annually to express their grievances about the way the Food Stamp Program is administered. Representatives of the federal and state agencies charged with administering the program have listened and most often agreed with the accuracy and justice of the complaints of the poor: inadequate outreach, the stigma of welfare, the winter allowance penalty, interminable waiting for determination of eligibility, and inadequate benefit levels. Promises for remedial action have been intimated and made.

However, as the following report dramatically illustrates, the "body-count" measure of our capability to deliver food subsidies to the people who need food has been less than a reasonable success. Ranchers are talking of selling off breeding stock and farmers are promoting reduction of the number of acres they plant in self-defense. As my friend, Charles Banderob, the President of the Montana Senior Citizens Association, says, "It seems we've been more busy than thorough." Perhaps by keeping the facts in this report in mind as we enter the second ten years of the Food Stamp Program, we can find the will to become thorough.

dan newman, Administrator
Human Resources Division

PARTICIPATION IN THE
FOOD STAMP AND COMMODITY PROGRAMS
AMONG
LOW AND VERY LOW INCOME PERSONS
IN MONTANA

The following charts provide a "best estimate" of the success of the Food Stamp and the Commodity Programs as presently operated by the Department of Social and Rehabilitation Services in Montana in serving the population they are intended to serve. In calculating this "success percentage" there have been two populations identified: a) those persons with incomes below the Federal poverty level guidelines, and b) those persons with incomes below 125% of the Federal poverty level guidelines.

By identifying these two populations, two levels of need were also identified. Ideally, the Federal food supplement programs should reach as many of the people in the broader category, i.e. those with incomes under 125% of the federal poverty level, as possible as these persons are almost always eligible to receive assistance when their allowable income deductions are made. Failing this, though, the Food Stamp and Commodity Programs should serve nearly 100% of the people with incomes less than Federal poverty levels as these persons are in the most dire need of assistance to maintain a minimally nutritious diet. However, as th data indicates, these programs are failing to reach either population to a satisfactory degree.

The low participation rates in the Food Stamp Program indicates this failure dramatically. Of the state's 56 counties, only two have Food Stamp Programs serving more than 50% of the population with incomes below 125% poverty level and only twelve are reaching more than 50% of the persons with incomes below the poverty level. Overall, less than one in three persons with incomes below 125% of the poverty level are receiving food stamps; only three in seven persons with incomes below the poverty level are recipients.

The Commodity Program has a similar record of service. In operation for about thirty years in Montana, this Program is now being phased out in favor of food stamps. The only persons now eligible to receive commodities are the residents of six of Montana's seven Native American reservations. (Fort Peck Reservation no longer offers the program.) As the data indicates, despite the thirty years of operation, less than 50% of the eligible population are receiving commodities. (It must be noted that since Food Stamps have become available on the reservations many persons have switched from commodities to them.)

Nevertheless, in combination, the Food Stamp and Commodity Programs are serving only one in three Montanans with incomes less than 125% of the Federal poverty levels and only one in two Montanans with incomes less than the Federal poverty level. Given the indicated levels of service, it would seem that neither program is adequately serving the population it was created to serve.

SOURCES AND ASSUMPTIONS

The data in these charts were obtained from several sources. The Food Stamp Participation Rates were derived from the following sources:

a. "Projected Population:" Montana Population Projections, Information Systems Bureau, Division of Research and Information Systems, Department of Intergovernmental Relations. (Unpublished Summary Projections using Migration Survival Method.)
b. "Percent Below (125%) Poverty Level:" Table 3.5, County Profiles, Division of Research and Information Systems, Department of Intergovernmental Relations: United States Census of Population, 1970, Volume I, Characteristics of the Population, Part 28, Montana.
c. "Estimated Number Below (125%) Poverty Level:" Obtained by multiplying the Projected Population by the Percent Below (125%) Poverty Level.
d. "Food Stamps Recipients January 1975:" Statistical Report, January 1975, Bureau of Research and Statistics, Department of Social and Rehabilitation Services.
e. "Estimated Percent Population Served:" Obtained by dividing the number of Food Stamps Recipients January 1975 by the Estimated Number Below (125%) Poverty Level.

The Commodity Participation Rate was derived in a similar manner from the following sources:

a. "Estimated Population:" Table A-2, Profile of the Montana Native American, Coordinator of Indian Affairs Office, Office of the Governor: Billings Area Office, Bureau of Indian Affairs, Department of the Interior.
b. "Percent Below Poverty Level:" Division of Research and Information Systems, Department of Intergovernmental Relations: United States Census of Population, 1970, Volume I, Characteristics of the Population, Part 28, Montana.
c. "Estimated Number Below Poverty Level:" Obtained by multiplying the Estimated Population by the Percent Below Poverty Level.
d. "Commodity Recipients January 1975:" Food Supplement Unit, Division of Economic Assistance, Department of Social and Rehabilitation Services. (Unpublished)
e. "Estimated Percent Population Served:" Obtained by dividing the number of Commodity Recipients January 1975 by the Estimated Number Below Poverty Level.

The assumptions underlying these charts -- in addition to those assumptions underlying each specific component of the charts -- are as follows:

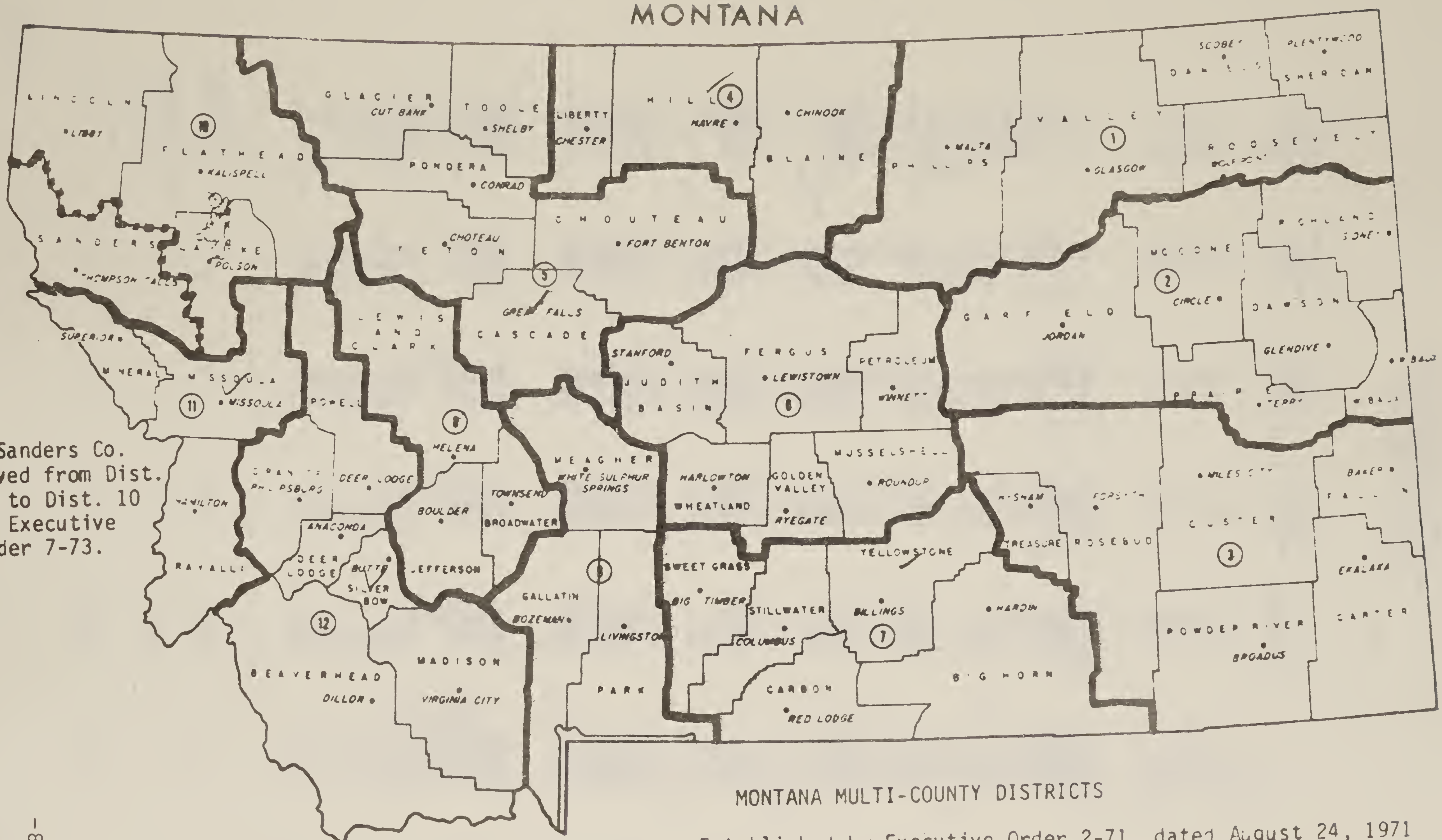
a. That the population as estimated is exact. (A special assumption relating only to the estimated population on the reservations is that the non-Indian population on each reservation has increased at the same rate as the Indian population.);

b. That the percent of persons with incomes below (125%) poverty level has remained constant since 1970; and

c. (1) That no one with an income above 125% of the poverty level received Food Stamps. (Applies only to the chart on food stamp particpation of persons with incomes below 125% of poverty level.);

(2) That no one with an income above the poverty level received food stamps or commodities. (Applies to the charts on food stamp or commodity participation of persons with incomes below poverty level.).

Special Note: Based as they are on the percent of persons with low and very low incomes in 1970, these charts do not reflect the economic stagnation that has affected several industries and areas of Montana. This recession has greatly increased the number of persons who are now qualified to receive food stamps. For instance, the almost complete halt of the lumber industry in the area around Missoula has raised that area's unemployment rate to over 14% and has resulted in an additional 1,600 new people now receiving food stamps as compared to January, 1974. In all probability, these people were not counted as low or very low income in 1970 thus their numbers are not reflected in the data. The end result of this increase in newly eligible people is that in certain areas of the state, the indicated percent of population served may be slightly inflated.



Sanders Co.
moved from Dist.
11 to Dist. 10
by Executive
Order 7-73.

MONTANA MULTI-COUNTY DISTRICTS

Established by Executive Order 2-71, dated August 24, 1971
Amended by Executive Order 7-73, dated October 29, 1973

PARTICIPATION IN THE FOOD STAMP AND COMMODITY PROGRAMS AMONG PERSONS WITH INCOMES BELOW 125% POVERTY LEVEL

DISTRICT	PROJECTED POPULATION	PERCENT BELOW 1.5 POVERTY LEVEL (1970)	ESTIMATED NUMBER BELOW 125 POVERTY LEVEL	FOOD STAMPS RECIPIENTS JANUARY 1975	ESTIMATED PERCENT POPULATION SERVED
District #1					
Daniels	2,787	16.2	451	29	6.43
Phillips	5,089	26.8	1,364	172	12.61
Roosevelt	9,716	31.4	3,051	444	14.55%
Sheridan	5,440	17.4	947	95	10.03%
Valley	9,404	24.3%	2,285	737	32.25%
District Totals	32,436	24.97	8,098	1,477	18.24
District #2					
Dawson	10,776	13.3	1,433	249	17.38
Garfield	1,739	20.1	350	17	4.86%
McCone	2,695	19.7	531	18	3.39%
Prairie	1,553	25.8	401	42	10.47
Richland	9,513	20.3	1,931	307	15.90
Wibaux	1,388	25.6	355	35	9.86%
District Totals	27,664	18.08	5,001	668	13.36%
District #3					
Carter	1,766	23.5	415	61	14.70%
Custer	11,629	17.4	2,023	442	21.85%
Fallon	4,099	19.9%	816	89	10.91%
Powder River	3,167	19.7%	624	32	5.13%
Rosebud	6,012	32.9	1,978	878	44.39%
Treasure	996	31.3%	312	72	23.08%
District Totals	27,669	22.29%	6,168	1,574	25.52%
District #4					
Blaine	6,136	36.1%	2,215	714	32.23%
Hill	16,763	20.8%	3,487	1,222	35.04%
Liberty	2,239	14.1%	316	22	6.96%
District Totals	25,138	23.94%	6,018	1,958	32.54%
District #5					
Cascade	87,171	16.7	14,558	4,729	32.48%
Chouteau	6,067	18.4	1,116	113	10.13%
Glacier	10,365	36.1	3,742	1,542	41.21%
Pondera	6,120	25.8%	1,579	230	14.57%
Teton	5,569	17.8%	991	204	20.59
Toole	4,983	16.3	812	251	30.91%
District Totals	120,275	18.95%	22,798	7,069	31.01%
District #6					
Fergus	11,894	20.5	2,438	585	24.00%
Golden Valley	851	25.4	216	48	22.22%
Judith Basin	2,485	22.7	564	38	6.74%
Musselshell	3,269	27.3%	892	219	24.55%
Petroleum	626	22.2%	139	-	---
Wheatland	2,331	22.6%	527	72	13.66%
District Totals	21,456	22.26%	4,776	962	20.14%

DISTRICT	PROJECTED POPULATION	PERCENT BELOW 125% POVERTY LEVEL (1970)	ESTIMATED NUMBER BELOW 125% POVERTY LEVEL	FOOD STAMPS RECIPIENTS JANUARY 1975	ESTIMATED PERCENT POPULATION SERVED
District #7					
Big Horn	10,145	33.5%	3,399	222	6.53%
Carbon	6,495	26.0%	1,689	337	19.95%
Stillwater	4,233	21.6%	914	97	10.61%
Sweetgrass	2,864	30.4%	871	74	8.50%
Yellowstone	91,976	16.4%	15,084	3,984	26.41%
District Totals	115,713	18.98%	21,957	4,715	21.47%
District #8					
Broadwater	2,431	29.6%	720	156	21.67%
Jefferson	5,874	18.8%	1,104	513	46.47%
Lewis and Clark	36,372	13.0%	4,728	1,782	37.69%
District Totals	44,677	14.67%	6,552	2,451	37.41%
District #9					
Gallatin	36,034	15.4%	5,549	1,298	23.39%
Meagher	1,947	35.9%	699	156	22.32%
Park	10,242	20.8%	2,130	558	26.20%
District Totals	48,223	17.37%	8,378	2,012	24.02%
District #10					
Flathead	43,377	18.7%	8,111	3,050	37.60%
Lake	15,188	31.3%	4,754	1,260	26.50%
Lincoln	21,997	12.3%	2,706	1,837	67.89%
Sanders	7,222	21.5%	1,553	661	42.56%
District Totals	87,784	19.51%	17,124	6,808	39.76%
District #11					
Mineral	2,956	15.0%	443	329	74.27%
Missoula	67,256	15.6%	10,492	5,070	48.32%
Ravalli	15,608	27.5%	4,292	1,052	24.51%
District Totals	85,820	17.74%	15,227	6,451	42.37%
District #12					
Beaverhead	8,882	22.6%	2,007	428	21.33%
Deer Lodge	14,212	17.4%	2,473	609	24.63%
Granite	2,637	21.3%	562	276	49.11%
Madison	4,911	28.1%	1,380	-	---
Powell	6,528	17.7%	1,155	520	45.02%
Silver Bow	39,783	18.0%	7,161	3,132	43.74%
District Totals	76,953	19.15%	14,738	4,965	33.69%
FOOD STAMPS STATE TOTALS:	713,808	19.17%	136,835	41,109	30.04%
PERSONS RECEIVING COMMODITIES:				7,211	
STATE GRAND TOTALS:	713,808	19.17	136,835	48,320	35.31

PARTICIPATION IN THE FOOD STAMPS AND COMMODITY PROGRAMS AMONG PERSONS WITH INCOMES BELOW POVERTY LEVEL

DISTRICT	PROJECTED POPULATION	PERCENT BELOW POVERTY LEVEL (1970)	ESTIMATED NUMBER BELOW POVERTY LEVEL	FOOD STAMPS RECIPIENTS JANUARY 1975	ESTIMATED PERCENT POPULATION SERVED
District #1					
Daniels	2,787	10.1	281	29	10.32
Phillips	5,089	16.6	845	172	20.36%
Roosevelt	9,716	23.3	2,264	444	19.61
Sheridan	5,440	11.4	620	95	15.32%
Valley	9,404	16.8	1,580	737	46.65%
District Totals	32,436	17.23%	5,590	1,477	26.42%
District #2					
Oawson	10,776	8.4%	905	249	27.51%
Garfield	1,739	17.3%	301	17	5.65%
McCone	2,695	13.8	372	18	4.84%
Prairie	1,553	19.1%	297	42	14.14%
Richland	9,513	13.8%	1,313	307	23.38%
Wibaux	1,388	15.2%	211	35	16.59%
District Totals	27,664	12.29	3,399	668	19.65%
District #3					
Carter	1,766	17.5	309	61	19.74%
Custer	11,629	11.6	1,349	442	32.77%
Fallon	4,099	12.6	516	89	17.25%
Powder River	3,167	13.0%	412	32	7.77%
Rosebud	6,012	25.8%	1,551	878	56.61%
Treasure	996	22.8%	227	72	31.72%
District Totals	27,669	15.77%	4,364	1,574	36.07%
District #4					
Blaine	6,136	31.4	1,927	714	37.05%
Hill	16,763	14.8	2,481	1,222	49.25%
Liberty	2,239	8.4%	188	22	11.70%
District Totals	25,138	18.28%	4,596	1,958	42.60%
District #5					
Cascade	87,171	10.9%	9,502	4,729	49.77%
Chouteau	6,067	11.6%	704	113	16.05%
Glacier	10,365	29.5%	3,058	1,542	50.43%
Pondera	6,120	18.2%	1,114	230	20.65%
Teton	5,569	12.0%	668	204	30.54%
Toole	4,983	11.6%	578	251	43.43%
District Totals	120,275	12.99%	15,624	7,069	45.24%
District #6					
Fergus	11,894	14.9	1,772	585	33.01%
Golden Valley	851	11.7%	100	48	48.00%
Judith Basin	2,485	15.2%	378	38	10.05%
Musselshell	3,269	19.2%	628	219	34.87%
Petroleum	626	17.8%	111	-	---
Wheatland	2,331	16.3%	380	72	18.95%
District Totals	21,456	15.70%	3,369	962	28.55%

DISTRICT	PROJECTED POPULATION	PERCENT BELOW POVERTY LEVEL (1970)	ESTIMATED NUMBER BELOW POVERTY LEVEL	FOOD STAMPS RECIPIENTS JANUARY 1975	ESTIMATED PERCENT POPULATION SERVED
District #7					
Big Horn	10,145	25.3%	2,567	222	8.65%
Carbon	6,495	19.2%	1,247	337	27.02%
Stillwater	4,233	13.7%	580	97	16.72%
Sweetgrass	2,864	23.6%	676	74	10.95%
Yellowstone	91,976	12.1%	11,129	3,984	35.80%
District Totals	115,713	14.00%	16,199	4,714	29.10%
District #8					
Broadwater	2,431	23.1%	562	156	27.76%
Jefferson	5,874	13.4%	787	513	65.18%
Lewis and Clark	36,372	8.8%	3,201	1,782	55.67%
District Totals	44,677	10.18%	4,550	2,451	53.87%
District #9					
Gallatin	36,034	11.1%	4,000	1,298	32.45%
Meagher	1,947	24.9%	485	156	32.16%
Park	10,242	14.3%	1,465	558	38.09%
District Totals	48,223	12.34%	5,950	2,012	33.82%
District #10					
Flathead	43,377	12.9%	5,596	3,050	54.50%
Lake	15,188	22.3%	3,387	1,260	37.20%
Lincoln	21,997	7.1%	1,562	1,837	117.61%
Sanders	7,222	14.0%	1,011	661	65.38%
District Totals	87,784	13.16%	11,556	6,808	58.91%
District #11					
Mineral	2,956	8.4%	248	329	132.66%
Missoula	67,256	11.2%	7,533	5,070	67.30%
Ravalli	15,608	18.6%	2,903	1,052	26.24%
District Totals	85,820	12.45%	10,684	6,451	60.38%
District #12					
Beaverhead	8,882	17.4%	1,545	428	27.70%
Deer Lodge	14,212	10.8%	1,535	609	39.67%
Granite	2,637	15.8%	417	276	66.19%
Madison	4,911	18.1%	889	-	---
Powell	6,528	9.5%	620	520	83.87%
Silver Bow	39,783	11.4%	4,535	3,132	69.06%
District Totals	76,953	12.40%	9,451	4,965	52.04%
FOOD STAMPS STATE TOTALS:	713,808	13.37%	95,422	41,109	43.08%
PERSONS RECEIVING COMMODITIES:				7,211	
STATE GRAND TOTALS:	713,808	13.37	95,422	48,320	50.64%

PARTICIPATION IN THE COMMODITY DISTRIBUTION PROGRAM AMONG PERSONS WITH INCOMES BELOW THE POVERTY LEVEL

RESERVATION	ESTIMATED POPULATION	PERCENT BELOW POVERTY LEVEL (1970)	ESTIMATED NUMBER BELOW POVERTY LEVEL	COMMODITY RECIPIENTS JANUARY 1975	ESTIMATED PERCENT POPULATION SERVED
Blackfoot	7,835	53.48%	4,190	1,357	32.39%
Crow	7,434	42.77%	3,180	2,116	66.54%
Flathead	17,219	25.96%	4,470	1,638	36.64%
Fort Belknap	1,822	60.01%	1,093	564	51.60%
Northern Cheyenne	3,286	40.44%	1,329	709	53.35%
Rocky Boy's	1,594	65.80%	1,049	827	78.84%
STATE TOTALS:	39,190	39.07%	15,311	7,211	47.10%

EXAMINATION OF STEVE GOLDSTEIN

Cross, by Applicants

By Mr. Bellingham:

Q How old are you, sir?

A Thirty.

Q And you are executive director of the Montana State Low Income Organization?

A That's correct.

Q Headquarters where?

A In Helena, Montana.

Q And how long have you been executive director?

A Executive director approximately six months, sir.

Q Prior to that time, what did you do, sir?

A Prior to that time I was a coordinator for that organization for approximately a year.

Q And prior to that time?

A Prior to that time I was a logger, a feller and also a bucking sawyer in Montana.

Q And prior to that time?

A Prior to that time I have worked construction, been an agricultural laborer; I have worked as an adult educator in an office of education project, and in assorted administrative roles in other organizations.

Q Are you resident of the state of Montana; were you born in Montana?

A I'm a resident for 3 or 4 years.

Q And prior to that time where did you reside?

A I come from upstate New York and lived there until the end of high school, and at a variety of residents, military service, college, and so on, before arriving in Montana.

Q Are you a graduate of some college?

A I'm a graduate of Antioch College in Yellow Springs, Ohio.

Q You say that the Montana State Low Income Organization has been following the Colstrip project for some time, and the board of directors went on record in '74 as opposing the construction; is that correct?

A That's correct.

Q That was a vote of the board of directors?

A That was a vote of the board of directors in October of 1974.

Q And that was prior to the time that this particular hearing was begun; is that correct?

A That's correct.

Q And at that time, then, the board hadn't had any opportunity to review anything that occurred during the course of these proceedings or any of the exhibits; is that right?

A That's correct, they had an opportunity to examine only the material that had been developed as of that date.

Q Well, you make the point here that you don't think that the several questions have been adequately addressed, during the course of these proceedings, I presume; is that your thesis on that point?

A Yes.

Q And among that, the impact of the Colstrip project on the larger group of fixed income, low income, distressed and underprivileged Montanans?

A That's true.

Q That is in your statement. Now the Utility Siting Act, as you know, does not refer at all to fixed income, low income, distressed, or underprivileged Montanans; does it?

A I have the words here, but rather than look for it, it does deal with the affect on the citizens of the state.

Q Right, but it doesn't pick out any group or classification of citizens in this language, does it?

A No, it assumes that all citizens' interests will be protected.

MR. BELLINGHAM: I have no further questions.

HEARINGS EXAMINER: Very well, your statement will be made part of the evidence in this proceeding.

(WITNESS EXCUSED.)

HEARINGS EXAMINER: Is Mr. Conrad Burns here? (No response.) Mr. Adams?

ROBERT F. ADAMS, JR., appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF ROBERT F. ADAMS, JR. WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

ENVIRONMENTAL INFORMATION CENTER

P.O. BOX 12
HELENA, MONTANA 59601

My name is Robert F. Adams Jr. and I am President of the Environmental Information Center's Board of Directors. The EIC is a Helena-based citizens group with some 700 members in the state of Montana who are concerned with the wise and socially just use of this state's natural resources.

Montana's history has been characterized by a colonial economy. Time and again we have given our vast wealth of natural resources so the rest of the nation -- and primarily industry -- can benefit. We have received little in return. History is being repeated with Colstrip 3 and 4; only now Montana is being asked to also sacrifice its air and water quality and seriously impact an agricultural way of life. All this so that the west coast can have relatively cheap power without bearing the direct environmental costs of having the plants built near the load centers where the power will be used.

No matter how sophisticated pollution abatement devices are they cannot control all pollutants. If Units 3 and 4 are constructed, it is predicted that air pollution in the Colstrip area will be comparable to the current multi-industry air pollution problem in Billings, particularly since the physical settings of both areas are similar. Particulates and gases emitted from other power plants have been reported to create numerous water quality-related problems and acid rains have been directly linked to sulphur emissions from plants such as proposed Units 3 and 4. Although 3 and 4 may possibly meet air quality standards, the synergistic effects of small amounts of combined effluents could have a very detrimental effect on crops and vegetation in Eastern Montana. The major pollutant emitted from coal-fired power plants is sulfur dioxide. Sulfur dioxide emissions are considered by both European and U.S. scientists to be the main cause of the increased acidic precipitation currently falling on large areas of Europe and the Northeastern U.S. Colstrip Units 3 and 4 will have emissions more than twice those of Units 1 and 2. These added emissions will increase the area of acidic precipitation and the resultant damage. An ever increasing acidity of precipitation will occur throughout this area, and the major increase will occur in a 40 to 60 mile radius from the generating plants.

Game mammals in the Colstrip area include mule deer, white-tailed deer, pronghorn antelope, and bighorn sheep. Five species of upland game birds are also found in this area (sharp-tailed grouse, ring-necked pheasants, sage grouse, gray partridge) and small populations of wild turkeys. The Yellowstone River and its tributaries are used by large numbers of waterfowl as breeding, wintering and resting areas during migration. Several species of large birds are also known to breed in the area. A large number of heron rookeries are found along the Yellowstone and large numbers of bald eagles concentrate along the Yellowstone during spring migration.

The Yellowstone River, which is the largest free-flowing river in the continental U.S., is of tremendous importance as a fishery, from the excellent cold water fishery of the upper and middle river to the diverse warm water fishery of the lower river. Thirty-nine fish species have been recorded in the Yellowstone between Hysham and Miles City. A large, continuous flow of water is required by the cooling towers of coal-burning plants. This water would be taken from the Yellowstone River, altering its natural flow. Most importantly the water withdrawals of Colstrip Units 3 and 4 may only be the beginning of a number of water-consuming energy conversion complexes (which could use up to 3.36 million acre ft. of Yellowstone Basin water per year). Whether withdrawals occur in a few large depletions or in numerous small withdrawals is irrelevant - the probable cumulative effect is what is important.

The construction and operation of Colstrip Units 3 and 4 would produce three types of negative impacts upon wildlife and the fishery: 1) pressures resulting from human population increases, 2) air and water pollution as a result of the emissions from the plants, 3) disruption of the normal flow patterns of the Yellowstone River due to water withdrawals. There will be an appreciable habitat loss due to an estimated human population increase of over 4,000; this habitat loss as well as that resulting from the construction of the plants is permanent. The projected population increase will undoubtedly result in substantially more legal and illegal hunting pressure upon wildlife as well as harassment of wildlife from recreational pursuits such as motorcycling and snowmobiling.

Nowhere can one find the type of data needed to answer the envrionmental questions posed by the siting of 2,100 megawatts of coal-fired power generation at Colstrip (Units 1,2,3,4). This is because federal and state agencies never dealt with baseline data gathering until after some of the large power plants went on line in the southwest. But it is known that coal-fired generating facilities have definite adverse impacts on rainfall, vegetation and wildlife.

If the construction of Units 3 & 4 is approved, two 500 kilovolt lines extending nearly 430 miles across Montana from Colstrip to Hot Springs would be constructed. The proposed 430 mile line would require a 300 foot corridor, which would directly affect 15,636 acres and indirectly affect many thousands of acres adjacent to the lines. The transmission lines would have a definite impact on agricultural lands. The location of the transmission lines could necessitate changing agricultural practices such as aerial spraying and sprinkler irrigation. Impacts of the transmission lines on urban areas include possible interference with communication systems, high noise levels and aesthetic degradation. The visual impact would have the most far-ranging effects, particularly on recreational land. Transmission lines would have a serious impact on lands such as back-country and primitive areas and places used extensively for recreation (campgrounds, for example). For many people the reduction in the beauty of a particular landscape would seriously diminish the quality of their lives.

Why should Montana be forced to pay the high price of having the plants built here when 70% of the power will be owned by out-of-state interests and it is cheaper to generate the power near the load centers? Portland General Electric Company stated in a report filed with the Board of Natural Resources that it would cost $102.85 per kw to deliver electricity from Colstrip to Boardman, Oregon. While the cost would be $92.70 per kw to generate electricity at Boardman using coal from Montana or Wyoming.

Secondly why should Montana be asked to have Colstrip 3 and 4 built here when it is already doing more than its fair share to help produce energy for the rest of the nation by exporting large quantities of coal and hydroelectric power facilities. When Colstrip Unit 2 goes on line Montana will be producing an equivalent of 8,366.28 megawatts (coal shipped out, coal-fired and diesel-fired generating facilities and hydroelectric power) while Montana's peak electrical demand in 1974 was 1,213 megawatts.

In view of the sacrifices the people and land of Montana are being asked to make by having Units 3 and 4 built here, one crucial question must be addressed: are these plants needed?

For the nation as a whole the record of electrical consumption historically shows a doubling about every 10 years over the past four decades. This has led to an abnormal degree of confidence in continued growth; underlying causes are given little attention, and growth is treated as if it were a natural function of time alone with no consideration for the environment or future generations.

In order to assess the question of NEED we should examine recent land development patterns in Montana. For land use practices cannot realistically be separated from energy consumption. The EIC recently conducted a survey of rural subdivision activity in Montana and found that over 334,000 acres had been subdivided in 35 Montana counties as of July 1, 1974. Because of the many land divisions that escape public review this is a conservative estimate. The energy-intensiveness of far-flung rural developments is staggering. The Big Sky resort poses an interesting example. The Montana Power Company is a principal investor in Big Sky,(5.91% - Impacts of Large Recreational Development on Semi-primitive Areas, M.S.U., June 1973) an "all-electric resort. MPC obviously viewed Big Sky as a large consumer of electricity, and since more electrical consumption has traditionally meant more profits, the utility invested in Big Sky. And then along came Colstrip 3 and 4. The next step is not difficult to imagine. MPC used the alleged "need" of electricity for the second homes of Big Sky as one of three major developments in Montana creating the demand for Colstrip 3 and 4. In other words the Montana Power Company has helped create a "need" for more electricity as justification for providing more supply. It is actually a case of creating demand to provide supply instead of the more traditional approach.

Let us examine Big Sky's projected energy demand a little closer. The electrical load projections from both Big Sky and the Montana Power Company indicate a demand of over 30 megawatts of power. This includes 2,700 condominiums, 1,226 homes, sewage facilities, hotels, lodges, ski lifts and 32 electrically-heated swimming pools! By 1980-81 the projected average load at Big Sky is expected to exceed the combined 1974 peak loads of Bozeman, Belgrade, Manhattan and the surrounding rural co-operatives. (DEIS on Clyde Park - Dillon 161 KV line, Department of Natural Resources and Conservation, January 1976).

The point of all this is that even if mine-mouth generation were equitable, which it is not; and even if most of the energy were to be used in Montana, which is not the case; we must seriously challenge Colstrip 3 and 4 on the fundamental assumption upon which it rests: that demand must be equated with need. This assumption must be rejected if we are to protect our unique natural and social heritage in Montana for the long-term benefit of this and future generations. Colstrip 3 and 4 represents the antiquated emphasis on increasing the supply of energy which is precisely the opposite direction that we must pursue in our society. We simply have no choice but to decrease demand through real energy conservation and a fundamental shift to less-consumptive ways of living.

But let us examine the social incentive for lessening the demand for energy. What incentive will the heavily-populated and industrialized west coast load centers have to curb consumption if the real costs in terms of degraded land, water and air are hidden from their perception in the distant ranching country of eastern Montana? The answer is none! We will never achieve lasting, effective energy conservation unless those most responsible for the consumption of finite energy resources are made to bear the environmental, social and economic costs of their increasing energy demand. This a matter of simple social equity. People will think twice before buying unnecessary second homes, oversized automobiles and extravagant appliances if they must choke on the effluent created by their own consumption and experience acid rain caused from power plants falling on their gardens and land. Thus load-center generation is inextricably tied to the kind of demand adjustments that we have to make in our society

EXAMINATION OF ROBERT F. ADAMS, JR.

Cross, by Applicants

By Mr. Bellingham:

Q According to your statement, Mr. Adams, you're president of the Environmental Information Center's board of directors?

A That is correct.

Q And this is a Helena based citizens' group with some 700 members in the state of Montana; is that right?

A Yes, sir.

Q How old are you, sir?

A I'm 33.

Q And how long have you held the job as president of this group?

A I've been president of the Environmental Information Center since January of '76.

Q This, of course, is not a full-time job, or is it?

A No, indeed it's not, sir. It's a voluntary position.

Q What is your occupation, sir?

A I'm an attorney.

Q Here in Helena?

A Yes, sir.

Q In fact, I didn't even recognize you, I'm sorry.

HEARINGS EXAMINER: You can put in a plug for the firm, if you wish at this time. (Laughter.)

A Is that your next question, sir?

Q No, I'm going to stay away from that. Where are you from, sir?

A My home, originally, is Mobile, Alabama, born and reared there.

Q And you're a rather latecomer to Montana, are you not?

A Well, I've been here 6½ years.

Q How is this particular organization funded?

A That's not relevant to this proceeding, sir.

Q I will ask the question; how is this organization funded, do you know?

A Yes, I do.

WITNESS: Mr. Chairman, should I answer that?

HEARINGS EXAMINER: I think throughout the proceeding the question has been asked on both sides, so I think it would be proper.

WITNESS: Fine.

A The organization is voluntarily funded by pledges, contributions of these individuals, these 700-odd people around the state of Montana. The underlying or the baseline for the funding is a pledge program in which individuals or families pledge so much per month.

Q That wasn't so bad to answer, was it, afterall. Do you have any funding elsewhere, from other sources?

A I would say the answer to that really is no, because this is -- I couldn't put a percentage on it, but I would say 95 percent of the funds are from these relatively small contributions. We don't have any pipeline with the EDF or the Sierra Club, if that's the intent of the question.

Q You've gone into quite a few subjects during the course of your testimony here relative to pollution devices, animals, wildlife, alternatives and so forth; may I ask you who wrote this testimony?

A Sir, the testimony was prepared by the Environmental Information Center staff, paid staff.

Q And how many people are on that staff?

A We have four persons on the staff.

Q Full time?

A Well, it's a question of what one would call full time. I would say that those 4 people do put in just about full time work. They are certainly and adequately paid for their services.

Q But they do devote full time to this?

A Certainly 3 of them do, Mr. Bellingham, is it?

Q Yes.

A And the forth would be a part-time secretary who puts in more than her compensation, that's for sure.

Q And the statement was prepared by them from data they had accumulated?

A Yes.

Q Where did they accumulate this data; do you know?

A Much of it has come from the draft Environmental Impact Statement on Colstrip 3 and 4, November '74.

Q Prepared by?

A Prepared by DNR.

Q The Department of Natural Resources?

A Yes.

Q So a lot of this testimony, then, is taken from that; is that correct?

A A lot of the factual, statistical portion of the testimony is taken from that, yes.

Q Has anybody down there monitored these hearings at all, during the course of the rather lengthy time that it's taken?

A You mean anybody from the Environmental Information Center?

Q Yes.

A During some of that time, yes, sir.

Q But certainly during all of the entire proceeding?

A Not the entire proceeding, no.

Q They have not had access to the transcripts or the exhibits, I assume?

A Excuse me, sir?

Q They have not had access to the exhibits or the transcripts?

A They have probably had the same access as other interested persons; they have seen some of the exhibits, yes.

Q You don't know to what extent they have delved into these things, I assume?

A I'm sure they haven't read each and every one verbatim, no.

Q It would be very unusual if they had, is that correct? (No response.) You mention on page 3, the bottom part, about a study, Portland General Electric Company, in a study filed with the Board of Natural Resources that would cost x number of dollars per kilowatt to deliver electricity from Colstrip to Boardman, Oregon, and the cost from using coal from Montana would be x number of dollars; are you familiar with that study at all?

A I have not read the study, no, sir.

Q You're not familiar with it? Are you aware of the fact that there was testimony in this case heretofor by the person that was involved with that study to the effect that at that time, back in 1971, I believe, that they were not very sophisticated insofar as their work product was concerned; and that if they did not, when they prepared that study, take into consideration the constantly escalating costs of railroad transportation rate; are you aware of that?

A I was not aware that someone had to come in and make an embarrassing or recogize this as an embarrassing statement for Portland General Electric.

Q I didn't say he recognized that as an embarrassing statement; he made that statement; he wasn't embarrassed about it at all. But are you aware of that?

A I'm aware that there has been some corrective testimony here; some attempt to correct a testimony relating to this point, but I don't know the full verbatim text of what was said.

Q And do you know of a recent study that has been prepared by the same group, Portland General Electric Company, in which they have fully analyzed all of the input that should have been analyzed in the original study; they've come to a contrary conclusion of this particular study that you refer to; you're not aware of that either, are you?

A I'm not aware of whether that's in the record or not, no.

Q It certainly is, Mr. Adams; I can assure you.

A Is it permissible -- well, we'll let that go, it's --

Q Well, I'm not testifying today, Mr. Adams.

A I realize that and that's why I want to --

Q I'll be very happy to furnish you sometime, not tonight, I can assure you, but some future time, if you want, the information relative to the other testimony. Are you aware of the fact, other than what you've learned here today, that Montana Power for many years has imported up to 20 percent of its electricity that it furnishes to its customers?

A The Montana Power imports 20 percent of electricity that it furnishes to its customers in Montana?

Q Right, from outside the state of Montana. Were you aware of that?

A I'm only aware that some 6 or 7 times over the megawatt requirements of the state of Montana, as of 1974, are being presently produced, or the equivalent of that amount of energy is being produced in Montana. I am not aware of and don't have the background on the particular statement which you offer to me; no, sir.

Q Well, now, you're talking about the state of Montana; I'm talking about the Montana Power Company, itself.

A Well, I was talking about the power generated -- I don't intend to argue with you, sir; I'm just trying to make sure I understand the question.

Q I'm not going to argue with you, unless the occasion arises, I can assure you. But you're talking about the entire state of Montana.

A Excuse me, the service area served by Montana Power, if you put it that way, would be the power generated by Montana Power's hydroelectric and full power facilities as they exist today, including, I believe, exports of coal which go into making up the energy equivalency there. It's 6 or 7 to 1, that figure was; 1200 megawatts versus 8300, or something.

Q Where did you get this information, Mr. Adams?

A I think this is out of the draft EIS.

Q Well, you can find almost anything in there, apparently. Let me ask, do you know what the service area of Montana Power is in the state of Montana?

A I don't know what the square miles are. I know that Montana-Dakota Utilities serves a portion of eastern -- southeastern part of the state; and there may be some service in the extreme northwest by, is it Pacific Power and Light or Puget Sound Power and Light, one of those two; up around Thompson Falls, I'm not sure.

Q Well, now, this figure that you came up with a while ago about Montana Power and generation provided by coal that's exported and so forth equals a certain amount; you said that you think you got that from the Department of Natural Resources' draft?

A I believe that is is -- oh, that figure may be some of Lieutenant Governor Bill Christianson's data heretofor submitted in the record. It seems to me he had a table of equivalencies of generated power from the hydroelectric plants and from the various coal-fired stations now operated by Montana Power.

Q You say you think he introduced that into evidence in this case?

A I understand that he did, yes.

Q I notice here at the bottom of the next to the last page that you go after Montana Power because it has invested in Big Sky some 5.91 percent of the total stock; are you yourself aware of that, or has this figure been fed to you by your staff?

A No, I haven't seen the direct source of that figure. I think I can rely on the staff to percent an accurate figure as to that 5.19 percent; whatever the percent is, I understand that there is a substantial investment in this.

Q Well, it's 5.91 percent out of the total 100 percent, isn't it?

A Let's suppose that, if not the state of Montana, perhaps the Federal Power Commission regulates the amount of investment that a public utility, or excuse me, an investor utility, can place in any one project. I don't know whether there is any percent limitation. Anyway, 5.91 percent of whatever the assets worth of Big Sky must be a very substantial figure, would you not agree?

Q Well, you indicate here that Montana Power officers view Big Sky as a large consumer of electricity; and since more electrical consumption traditionally meant more profit to utility invested in Big Sky; that isn't you language, I take it. This is written by one of your staff members?

A It's an attitude of mine, though. I feel perfectly comfortable with the language that is in this written testimony.

Q That's a speculation, obviously, is it not?

A I don't whether the Montana Power Company is going to turn a profit in a particular year out of their investment in Big Sky or not; but I think the philosophy of the thing is such that at the same time when your people are supposedly advocating the conservation of energy, you're at the same time, by the placement of your dollars, supporting a false need, a generated demand for electricity that is not in the interest of all the people. It is in interest to those persons who can pay the dollars to have the kind of profit there, use the facilities.

Q You say a false need?

A Yes.

Q You view Big Sky as a false need?

A I say Big Sky is not a need in the sense that electricity is needed to provide comfort to peoples' homes in the winter; it is rather an extravagant need if it is all a need. I say that it is an artificially-generated demand which has no real significance to the needs of the average citizen of Montana.

Q Then, I take it, you're very much against Big Sky resort?

A I'm against the excessive use of energy represented by Big Sky or similar developments.

Q You don't mean to infer here, do you, Mr. Adams, that Big Sky would not have been built if Montana Power had not taken up 5.91 percent of its stock?

A No, I didn't mean to imply that at all.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Thank you, Mr. Adams, for your testimony.

(WITNESS EXCUSED.)

HEARINGS EXAMINER: Mr. Paul Richards.

PAUL T. RICHARDS, appearing as a public witness, having been first duly sworn upon his oath, both as to his written direct testimony and as to the oral testimony to follow, was examined and testified as follows:

(THE WRITTEN DIRECT TESTIMONY OF PAUL T. RICHARDS WAS DIRECTED TO BE INSERTED AT THIS POINT.)

March 16, 1976

My name is Paul T. Richards. I am a member of the Montana House of Representatives, representing House District #32. I reside at 1002 Wilder, Helena, Montana.

I have been actively interested in the Colstrip Units 3 & 4 proposal since they first began to reach public scrutiny three years ago.

I have been involved with a considerable amount of energy-related legislation in the Montana Legislature. Last session, I was a member of the two House committees which were the most involved in energy and natural resource legislation: the House Business and Industry Committee and the House Natural Resources Committee.

I am a native Montanan. A sportsman who appreciates and respects the unrivaled fishing and hunting that Montana offers. A conservationist who realizes that our seemingly inexhaustible resources are indeed exhaustible. And an environmentalist who realizes that man cannot be so arrogant, nor so ignorant to divorce himself from the complicated ways of nature and establish a false dominance.

I am also an avid reader, interested in current events. Interested in politices. And corporate politics. And power. And the abuse of power.

It is these reading habits that bring me here today. For, I read a lot about Montana and her "duty" to site huge mine-mouth generation facilities within her boundaries. I read about the need for "national sacrifice areas" to relieve our energy problems. I read where thousands will be thrown out of work, factories will close, and homes will be cold and dark. I read of struggling ranchers and farmer, I read of diminishing wild lands. And I read of utility company executives.

And because I read these things, I become interested in their implications. These things fit together to make a fascinating, if somewhat discouraging, picture of the powers that be that shape the future of the Pacific Northwest.

First, let's look at the home front:

"Why is Colstrip electricity needed? To meet Montana's electrical needs, its environmental needs and its economic needs. And to help the Northwest meet its needs...which also helps Montana." (MPC newspaper advertisement, Independent Record, 10-20-74)

What are those electrical needs? "More electricity is needed for environmental clean-up, for jobs, new families, new homes and our young people." (MPC Radio Commercial 9-19-74).

Other commercials detailed the need even further:

In one, Bob and Margaret are getting married. As the bridal chorus plays in the background, the announcer explains that Bob and Margaret will need electricity.

Two high school swimmers know you have to put out alot of energy to win. And they'll need electricity when they grow up.

Some farmers are talking about their new electrically powered sprinkler irrigation system. Announcer: "As Montana's farmers strive to increase production to meet our ever increasing food needs, more electric energy will be required. One more important reason Montana Power is building generating facilities at Colstrip today."

A magazine advertisement carries this theme even one step further, "Many reasons are advanced for construction of Colstrip Generating Units 3 & 4, but they all boil down to food on Montana's tables." (Montana Rural Electric News, March - 75).

A radio commercial puts the future of 144,000 young Montanans at stake:

> "During the 1970's one hundred and forty four thousand Montanans are turning twenty one. And they'll all be out looking for jobs, getting married, and starting families. Their future will depend on getting enough electricity for their homes and to support their jobs in business, industry, and agriculture. That's why Montana Power is building at Colstrip. Montana's young people---one hundred and forty-four thousand more good reasons for Colstrip electricity."

A newspaper ad lines everybody up on one page: a farmer, a radio station engineer, a housewife, an industrial employee, a refinery worker, and a wood products worker, and they all agree that we all need electricity, because without electricity we wouldn't have any jobs.

The point is established. We depend on electricity and we definately don't want to run out.

But there were those in Montana that became aware of the scope of the proposed Colstrip generating facilities. In fact,' Colstrip Units 1,2,3, and 4 combined would produce about 2,100,000 kw, which is a large amount of power, to say the least. Especially when compared to the total generating capacity of every electrical generation facility in the state (1,877,047 kW in 1973). In other words, Colstrip Units 1-4 would produce 222,953 kW more than all the electricity being generated in the entire state!

Enter Step #2 of the publicity campaign.

"Finally, Colstrip electricity is necessary to help the Pacific Northwest avert a critical power shortage.

> Such a shortage certainly would have an adverse effect on Montana. Montana Power's close relations with the Pacific Northwest have benefited utility customers for more than 30 years by permitting Montana Power to purchase power until new generating plants were justified. Such benefits have carried responsibilities with them, such as Montana taking its turn when new generating plants are needed." (from an MPC pamphlet, "Energy and the Environment.")

In other words, it was our duty to help out the whole region by constructing Colstrip 3 & 4, in order to avert a major crisis. "George O'Connor, Montana Power president, said the utilities and citizens must do their part to solve the energy dilemma. He noted that Montana's percentage of volunteers during World Wars I and II was the largest among the states. O'Connor said Montanans must make as serious a contribution to solve the energy shortage as they would to defend the country." (Helena Independent Record, 9-30-73)

Or as Carl Anderson, director of the Environmental Protection Division of the Montana Power Company put it, "How would Montana survive if we received nothing from somewhere else? A lot of people in Pittsburgh eat smoke for what you want." (Great Falls Tribune, 4-10-74).

The banner was raised. In another commercial, we were told, "To put it simply, without Colstrip generating plants three and four, both Montana and the Pacific Northwest will face energy shortages before the end of the seventies." George O'Connor told the Northwest Electric Light and Power Associations convention on Tuesday that delays in power plant construction could mean future shortages." (Helena Independent Record 9-18-74)

At first, there was another point raised along with the idea of power shortages. That is, Units 3 & 4 had to be constructed by 1978, "O'Connor said the proposed generating facility must be operational by July of 1978 if the Pacific Northwest is to avoid power shortages more critical than those already experienced." (Missoulian, 6-7-73)

Because of this 1978 deadline, John Lahr, lobbyist for Montana Power had written off the proposed Colstrip Units 3 & 4:

> An MPC Lobbysit, John Lahr, said the chances of the Montana Power building were remote. He said the company is taking an exploratory look to determine if two plants are a sensible way to solve their electrical problems.
>
> Lahr said the reason there are odds against the construction of the giant plants is that unless they can be on the line by 1978, Washington

> power companies will have completed nuclear plants and no longer needed steam generation power. (Missoulian, 10-30-72)

But, somehow, the decision was made to go ahead with the plants. Montana Power continued to stress the urgency of the matter:

> A decision to disallow the petition would bring a "real catastrophe" in future years, O'Connor said. O'Connor's successor as MPC President, Joseph McElwain, said 1979 or 1980 would see massive power shortages in Montana causing the closure of state industries. (Great Falls Tribune, 3-5-75)

All these predictions of catastrophe make one look back at the first predicitons of catastrophe to come from Montana Power, relating to Colstrip Energy Development. On January 11, 1973, huge advertisements appeared throughout state newspapers with the banner headline: "WILL 1975 BE THE YEAR OF MONTANA'S FIRST BROWNOUT?" The ad continued to state that if Colstrip Units 1 and 2 were delayed or stopped, there definitely could be brownouts or power rationing in as short a time as three years. "There is no alternative. The Colstrip Generating plants must be built to meet your power demands." The advertisement contained a chart showing a 17% power deficiency by 1975, and a 35% power deficiency by 1981, should Units 1 and 2 not be built.

Now, let's take a look at 1975 and see what really happened. As the advertisement warned, Colstrip Units were not on the line. Did Montana suffer a 17% power shortage. Did "industry grind to a halt and jobs evaporate" as the ads warned? Were there brownouts? Was there rationing? Not to my knowledge.

In fact, this may be hard to believe, but Montana Power actuallyexpanded their electricity sales to out-of-state utilities. In 1975, Electric Sales to other utilities climbed to $3,188,000! This was an increase of some 63% from electric sales to other utilities in 1974! (Letters to MPC stockholders, Dec. 31, 1974 and 1975) Hardly a 17% power shortage.

I tried to obtain a breakdown of these sales, through the Montana Public Service Commission. Although this information must be filed with the Federal Power Commission on the 31st of this month, we were told that the figures were unavailable. We were also told that I could make my point "very effectively in narrative form without actual qualitative support." (Letter from Russ Doty, Counsel, PSC to Rep. Paul Richards, March 12, 1976)

Questions must be raised concerning these electric sales to out-of-state utilities. When the Montana Power Company succeeds in selling these large amounts of power out-of-state, what provisions are taken to insure that the Montana Power Company does not include these out-of-state sales in their demand forecasts?

I think Montanans should realize the potential for abuse: A utility sells large amounts of power to an out-of-state utility and then adds that figure in their demand forecast which they use to jusitfy how desperately Montana needs more power.

Another issue regarding the credibility of the Montana Power Company needs to be explored.

The Montana Power Company has repeatedly told us of the impending shortages Montana and thePacific Northwest will have to face. Contrast that with these statements:

> "There is no need to skimp on power in Montana. We need to conserve and not waste...but we are not energy-short in Montana." (George O'Connor, president of the Montana Power Company, at meeting of MPC consumers, stockholders, and executives. December, 1973, Holiday Inn, Bozeman)
>
> CHEAP POWER IS LURE FOR NEW INDUSTRIES
> "Project Energize" is emphasising "cheap abundant power" to encourage industries to locate in Montana in a series of Wall Street Journal advertisements. The ads are running now through mid-December in the eastern and midwestern editions.
>
> The ads also offer good living conditions and a productive labor market.
>
> Project Chairman Jack Palmquist, a Montana Power Co. official, said the company operates five dams on the Missouri River in Great Falls and has the capability to transmit whatever power is needed in the area from other plants in the state.
>
> Palmquist said a power-sharing agreement gives Montana users first call on the electricity generated there, with the overage going into the Northwest Power Pool. Great Falls area power costs are controlled by the Montana Public Service Commission and are rated among the lowest in the nation.
>
> The ads' praise of Montana's good fishing, skiing, and clean air is designed to appeal to city dwellers. (Great Falls Tribune, Sept. 22, 1974)

One other matter of interest might be brought to the attention of those concerned with electrical use and abuse in' Montana. Consider that Montana Power owns almost 6% of Big Sky. Also consider that former MPC President George O'Connor is a member of Big Sky's Board of Directors. Is it coincidence that the electrical needs of this project have skyrocketed and are now projected to being equivalent to the peak demands of Bozeman, Belgrade, Manhatten, and their entire surrounding rural districts?

One must question to what extent Montana Power is promoting consumption of a limited resource that is said to be in "shortage".

An advertisement in the fall, 74 edition of Montana Citizen answers my question: "In order to realize their projected growth, Anaconda and Big Sky of Montana will require nearly as much electricity as is needed to serve people living in Great Falls and Butte. Where will the electricity come from? Units 3 and 4and Colstrip."

If the Montana Power Company expects the people of Montana and the Board of Natural Resources to deal seriously with their proposals, it had best realize that their credibility is in doubt, when thet try to talk up both sides of as serious an issue as an energy shortage.

Where have we Montanans been able to turn for assistance and leadership during our attempts to evaluate our niche in the Pacific Northwest Power picture? Who has the expertise to coordinate and promote sound long-range energy planning, that stresses the more stable courses of energy conservation and alternative energy? If you're thinking of counting on the Bonneville Power Administration, you had better think twice.

BPA echoes Montana Power's statements on energy shortages:

> "Don Hodel, BPA administrator, said the delays, ranging from 3 to 25 months, are due largely to environmentalist pressure. That pressure, he said, means it takes utilities and power companies much longer to get the necessary licenses and permits.
>
> As a result of the construction delays, Hodel and other top BPA officials said, the region faces a huge potential power deficit in the late 1970's and early 1980's.
>
> "The power situation is pretty grim," said Ray Foleen, BPA deputy administrator." (Great Falls Tribune, 3-5-75)

BPA has been so concerned with this potential shortage, that they have been the main impetus behind getting the northwestern utilities together to charter the best ways to proceed with thermal generation.

Don Hodel, administrator of BPA, was the person who requested a meeting be set up between Montana Governor Tom Judge and the chief executives of four of the utilities who are involved in Colstrip 3 & 4. The reported purpose of the meeting was for the utilities to ask Governor Judge for assurances that Colstrip Units 3 & 4 could be built, before they paid the $1.3 million dollar filing fee.

The meeting took place Friday, May 4, 1973. Hodel began by saying that the group hoped to build Colstrip Units 3 & 4 "on an extremely tight schedule." George O'Connor, president of Montana Power, outlined the schedule proposed by the utilities:

May 15, 1973 - acceptance of application
December 15, 1973 - preparation of draft EIS
January 15, 1974 - preparation of final EIS
February 15, 1974 - Board of Natural Resources Hearing
May 15, 1974 - Final Decision from the State. (Missoulian May 5, 1973)

Judge stated that such assurances would be impossible - at least on the basis of present information.

To put it simply, no one has accused BPA of being hesitant in this matter of approving Colstrip 3 & 4. In fact, BPA is so convinced that Units 3 and 4 will be approved that it has already applied for $21.6 million dollars for 1977 to construct a new transmission line to help move Colstrip power throughout the Northwest. (Great Falls Tribune, 2-6-76)

Numerous BPA spokesmen and officials have even gone so far as to appear on Montana Power-sponsored advertisements which promote Colstrip Units 3 & 4.

Even Administrator Hodel appeared on these ads; talking about high-voltage transmission lines: "But the stories about damage to crops and scaring livestock as far as we know appear to be entirely without foundation." etc. (MPC TV ad, 9-12-74)

Hodel is quite willing to let his view on the energy crisis in the Pacific Northwest be known:

> "Somebody's got to thumb his nose at all this pseudoscientific rubbish and nonsense about the exhaustion of American resources...there are no limits to the sources of energy, given the patience and the money." (Calgary Herald, 6-14-75, Hodel Address to annual meeting of Northwest Public Power Association)

Hodel gives us a good view of the potential holocaust awaiting the Pacific Northwest:

> "...the electric utility industry in this region has drawn the special wrath of the prophets of shortage. By halting the needed expansion of our power supply system, they can bring this region to its knees. I can tell you that they're well on the road to accomplishing that goal...
>
> From its outset, the Hydro-thermal Power Program has been plagued by delays, drastic lengthening of construction leadtimes, and mind-boggling

> cost escalations...
>
> Either homes will be cold and dark or factories will close because the deficits are no longer manageable." (excerpts from speech given to the City Club of Portland, July 11, 1975)

Let's take a look at some of these deficits that we keep hearing about. A good look. One that goes deeper than smooth sounding television ads and press releases.

At the same time as these hearings, just two weeks ago, Mr. Hodel was testifying in Washington. It seems that in 1975, the Pacific Northwest sold 12 billion kilowatt-hours of SURPLUS electricity to the Pacific Southwest. This amounted to more than $40 million dollars and was 13% of BPA's total energy sales. Hodel told the House Public Works Subcommittee that the amount of power marketed to the Southwest has been limited by the capacity of transmission lines! (Great Falls Tribune, 3-3-76)

Testimony before the Board of Natural Resources by Mr. Bernard Goldhammer, former power manager of BPA shows that Puget Sound Power and Light has a contract to supply California with 150 megawatts through April, 1977 and another 150 megawatts until 1982. Upon further questioning, Mr. Goldhammer admitted, "The only power that Bonneville sells to California is surplus power." (P. 2855, Volume 17, Transcripts of Proceedings, Montana Board of Natural Resources)

Other questioning concerning the over-estimation of load forecasts for the Pacific Northwest drew this response from Mr. Goldhammer, "Now, as a result of the Pacific Northwest-Pacific Southwest intertie, I feel that within reason these plants can be marketed." (P.2771, BNR Hearings)

The new West Group Forecasts confirm that there has been a substantial increase in sales to the Pacific Southwest from the Pacific Northwest and that there will continue to be an increase!

There is but one way to interpret this information. We Montanans have been deceived! We are told of a shortage in Montana and it turns out to not be true. We are told of a shortage in the Pacific Northwest and even that turns out not to be true. Are they now going to tell us that it is our duty to help our sister states in the Southwest? Just how gullible do they think we are?

If I sound mad, it's because I am. It seems these West Coast utilities are selling power down to California, and then figuring those sales into their load forecasts which prove what a shortage they have!

It doesn't add up.

BPA counts on projects like Colstrip to bail them out of their irresponsible contracting of power. It is time to question the basis of BPA's contracting of these massive amounts of power. It is time to question the need to commit one-third of all the electricity consumed in the Pacific Northwest to the aluminum industry. It is time to challenge any federal agency that would contract enormous loads of electricity to yet another aluminum plant (that is owned 50% by the Japanese); especially in this day and age of energy "shortages."

It is time to question whether we will participate in a regional power planning scheme that encourages waste and deception. It is time to question whether we want substantial amounts of Pacific Northwest power committed to use in California, leaving states like Montana to make up the deficit, or "shortage." It is time to challenge an agency, the Bonneville Power Administration, which is supposed to represent the people, that, instead, has turned against us.

Let me summarize. Montanans are told that we face tremendous energy shortages in the Pacific Northwest.

Then we are told that it is our duty to provide the Pacific Northwest with the power necessary to stave off anticipated "shortages."

We are told that this is our duty as Montanans, because (to quote a Montana Power spokesman) "People in Pittsburgh eat smoke for what you want."

And then we are told not to pay attention as we see Pacific Northwest utilities securing new power sales to the Pacific Southwest.

And we are told not to pay attention when we see a federal agency investigating the possibilities of constructing new transmission lines to export power out of the Pacific Northwest. I have reached the breaking point concerning this obfuscating double talk. This sort of corporate arrogance cannot be tolerated in a political system that still purports to represent the comman man.

Yours is the most important decision to face the state in current times. You, the Board of Natural Resources, must see through the clouds of obfuscation that have hovered around this issue. You must see the decision that honestly is for the best interests of the State of Montana and her people, and not for the best interests of these out-of-state corporations.

September 28, 1973 an Associated Press article appeared in Montana newspapers entitled, "State energy officials hear report on Colstrip power complex" In the article was a short comment which summarized how many Montanans feel about Colstrip Units 3 & 4:

George O'Connor, Montana Power Co. President, said he believed the record of the utilities will speak for itself. He noted the project is the first to be contemplated since enactment of a state law regulating the location of power plants and associated facilities.

"This project must become a benchmark for all that follow," O'Connor said.

Your decision will, indeed, be a benchmark for all to follow.

HEARINGS EXAMINER: Mr. Bellingham?

MR. BELLINGHAM: The applicants at this time wish to strike the entire statement of Mr. Richards on the ground that it is replete and the fact that is comprised mainly of hearsay, consisting of direct quotations from pamphlets, newspaper articles, radio announcements, and so forth; something which has not previously been allowed in testimony in this case. He is doing indirectly what other people have been unsuccessful in doing directly.

HEARINGS EXAMINER: Well, I'm going to overrule it and finish it up.

EXAMINATION OF PAUL T. RICHARDS

Cross, by Applicants

By Mr. Bellingham:

Q How old are you, Mr. Richards?

A Twenty-one.

Q What is your occupation?

A I'm a production supervisor at Helena Rehabilitation Industries.

Q What are those?

A Helena Rehabilitation Industries is a community-based rehabilitative facility for the handicapped.

Q How long have you been down there?

A About 7 months -- 6 months and 29 days, or so.

Q What did you do prior to that?

A I was a farmer -- worked on a farm.

Q Ranch help?

A On a wheat farm.

Q Near Helena here?

A Fort Benton.

Q Owned by your family or somebody else?

A Somebody else.

Q How long did you work there?

A About 3, maybe more, months.

Q And prior to that time?

A I was a legislator.

Q Well, that doesn't take very much out of a year. What prior to that?

A I'm a body repairman.

Q Pardon me?

A Auto body repairman.

Q For how long?

A Are we going to go all the way back to my newspaper route?

Q We're going to go back until I run out of questions.

A Prior to working as a body repairman?

Q Well, let's see if I can remember all this, right off, fast.

A Excuse me if I make a mistake or so. I was --

Q Actually, we can do it this way, Mr. Richards --

A I can remember, that's fine. I was a research associate for Thurston Regional Planning Council.

Q How long?

A Only a couple months.

Q What date was that, do you know, what year?

A About January of '74.

Q And prior to that time?

A Student.

Q Where?

A Evergreen State College, Olympia, Washington; University of Montana, Missoula, Montana.

Q How long did you attend these?

A And while I was research associate at Thurston Regional Planning Council, I was also a student at Evergreen State College, Olympia, Washington.

Q I take it that you graduate from Helena High School?

A Yes.

Q How long did you go to college?

A Two years.

Q No degrees?

A No degrees -- not even two years, about a year and a half; maybe a year and three-quarters.

Q This particular statement was served upon us at 6:10 P.M. this evening. Does that mean that you just finished the statement shortly before that time?

A Fairly shortly before. I started typing yesterday morning, and I had to come here and get some assistance in typing and correcting.

Q And who did you obtain that assistance from?

A From my wife, Joanne, and from the secretary.

Q Secretary of what?

A Out there, and she said, and I believe her, and it is the truth, that she did not have a lunch break; the time she spent on that was her own, and that should be emphasized.

MR. DONEY: We hereby make the same offer for any proponents, Mr. Hearings Examiner.

HEARINGS EXAMINER: That's Mr. Doney speaking, I presume on behalf of the Department of Natural Resources.

MR. DONEY: That's right.

HEARINGS EXAMINER: I think you're a little late to make it, because this is the end of the hearing this evening; so you're safe.

Q Well, you finished it then just immediately prior to 6:10 this evening; is that right?

A I finished the basic work on the paper about Sunday.

Q And you've spent the time since then having it typed?

A Just getting it arranged in order --

Q And when did you start the paper?

A I started the paper in about September of 1973.

Q This particular paper?

A This particular paper. I have collected files and clipped articles since about 1970. I suppose if you were technical, I started the paper in 1970, sir.

Q Did you obtain any of this information from anybody else?

A I have obtained none of the information from anybody else except for some information there from the transcripts of these hearings; and I obtained that information from the secretary of these hearings.

Q As far as these clippings and so forth, you did this yourself; is that right?

A I did this entirely myself.

Q None of the information here came out of any office here in the Capitol building; is that right?

A No. I did get some information from the offices of the Montana

Power Company -- quite a bit.

Q What about the Northern Plains?

A No.

Q None?

A Well, let me think.

Q Speaking of Northern Plains Resource Council, you understand?

A Yes. To my memory, I cannot remember getting any information from Northern Plains Resource Council.

Q You don't think any of this information was obtained anywhere else other than what you've indicated; is that right?

A Well, I've been in contact with numerous parties, people, agencies, both public and private, etc., to get everything; and they've all helped me out. I've run down a lot of people, a lot of governors, a lot of energy offices, a lot of utilities, a lot of newspapers, a lot of everything.

Q Did we bring out when it was actually finished; what time today it was finished?

A I have no idea.

Q Was there any reason why it was brought in here as late as it was?

A This was the final day for public testimony.

Q But why bring it here at 6:10 this evening; is that so we didn't have an opportunity to look it over to any great extent?

A Oh, there was no malicious intent on my part on timing at all. I think if you're going to have public testimony, you're going to have to accept public testimony; and I think it's that simple.

Q We've accepted it and we've accepted a lot of it today.

MR. BELLINGHAM: No further questions.

HEARINGS EXAMINER: Very well, sir, you're excused.

(WITNESS EXCUSED.)

HEARINGS EXAMINER: Are there any other witnesses? If not, we'll stand in adjournment until Monday, the 22nd, at 1:30 P.M. when we start with Mr. Tourangiean, the last DNR witness; and then we'll start our rebuttal. Is that the right date and time? Monday at 1:30. Okay. Thank you very much, and we're in recess.

RECESS: 6:37 P.M.